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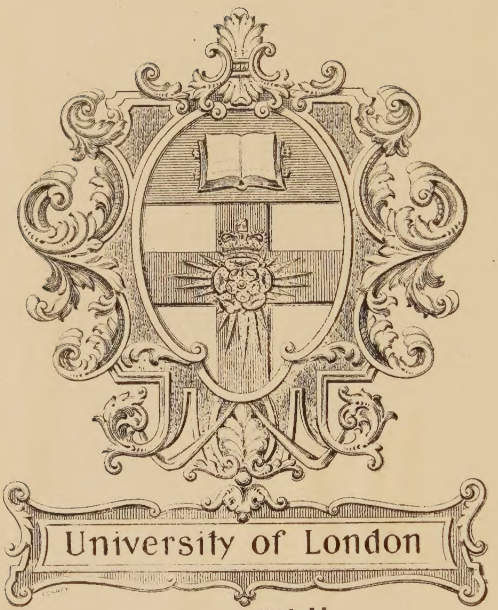

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EXCAVATIONS IN SIPHNOS

(PLATES 1–37)

FOREWORD

The delay in the publication of this report is due to World War II, and therefore requires no apology from us. A few drawings, notes and photographs were lost or mislaid during the evacuation of April 1941, and have not yet been traced. Post-war conditions have made it impossible to revisit Siphnos, where the great majority of the finds were stored. Such a visit, however, might not have availed us much, since, according to an official report received by the Ministry of Education during the occupation, the officer in command of the Italian garrison[1] took all the objects of value into his own custody, on the ground that they were insecurely housed. As this officer appropriated the catalogue also, the persons making the report were unable to say which of the finds had been removed; but it is believed that the two important seventh-century figurines in vase technique (Pls. 6–8) are among those missing. The two glass vases with mould-blown inscriptions from Roman graves (Pls. 25–6, 28) were subsequently bought by a well-known dealer in Athens from an undisclosed source, and resold to the Benaki Museum, where they now are. But these are the only objects that have reappeared. Others of the more important finds, including the three steatite seals (Pl. 9) and the engraved glass bowl (Pls. 33–4), had fortunately been transferred to the National Museum in Athens before the war.

In these circumstances we considered it preferable to publish our report without further delay, even if it entailed certain shortcomings. Indulgence must be sought in particular for the drawings of sherd profiles which are based on sketches made solely for reference and not for publication. We took the view that, in the absence of drawings made to scale, these imperfect illustrations were better than nothing at all.

J. K. B.
G. M. Y.

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[1] His name was naturally omitted from the report, but is stated by residents of Siphnos to be Lorenzo Martiglio.

I. ARCHITECTURAL REMAINS AND GENERAL ACCOUNT OF THE EXCAVATIONS

(PLATE I)

Acropolis Wall.

The ancient acropolis is situated on the north-western half of the summit of the Kastro hill. It was bounded by a marble ashlar wall, parts of which are still visible, the best-preserved portions being at the short south-east and north-west ends (Pl. 3. 3, 5). The wall today is nowhere more than six courses high and hardly, if at all, above the ancient foundation level. The construction is to all intents and purposes isodomic, but blocks of widely differing width are used in an apparently haphazard manner. The marble was probably quarried on the island.

Pl. 3. 3 shows a section of the north-west end, where the sixth course projects slightly and consists of uniformly large blocks. At the south corner (Pl. 3. 5) the lifting bosses have not been removed, and the blocks of the fourth course, which is considerably under the normal height, have their lower edges drafted in a way which is exactly paralleled in the krepis of the temple of Apollo at Delos.[2] It is possible that we have here the foundations of an important building, perhaps a propylon or even a temple.

The date of the wall could not be exactly determined. On grounds of historical probability we surmised that it was built towards the end of the sixth century. We know from the excavations that extensive building operations including the cutting of marble took place at the north-west end after the middle of the sixth century. Owing to disturbance by later builders, however, it was not possible to obtain any positive evidence which would enable us to determine the *terminus ante quem.*

It may be objected that a marble acropolis wall of ashlar isodomic construction can hardly belong to so early a period. It must also be admitted that none of the buildings with drafted blocks like those mentioned above are dated before the Persian wars. Nevertheless, I am still of the opinion that the wall was at any rate begun in the sixth century, although the construction may have dragged on for a generation or more owing to the interruptions caused by the wars. To build a marble acropolis wall must have been a flamboyant gesture at any time, even in an island where marble of a sort was readily available, and this gesture is most likely to have been made at the time when the Siphniots were making a display of their wealth at Delphi.

---

[2] *Délos* XII, 8 ff., figs. 8–9, where other parallels are quoted.

Excavations on the Acropolis.

The entire summit of the Kastro hill is occupied by medieval and modern buildings. A church dominates the highest point which, as we shall see, may well have been the site of an ancient temple. The only possible place where excavations could be made lay at the north-west end of the acropolis under the ruins of the medieval residence of the ruling family of Siphnos. Before anything could be done here a vast amount of fallen stones would have to be removed and the few remaining walls, which hung perilously over the village, would have to be pulled down. Accordingly in 1935 a test pit was sunk in one of the rooms of the medieval building. The results were considered sufficiently interesting to justify the undertaking and towards the end of the 1937 season the work of clearing was completed and excavations were begun.

The area available for excavation was restricted by the foundations of the medieval walls to six compartments, 2–3 m. wide and just over 10 m. long (Fig. 1*a*). At the inner end there was little depth of soil, and a ledge of rock was found to run diagonally from here to the north corner of the acropolis, with the result that areas 1–3 (numbering from east to west) had only a shallow covering of soil which was largely disturbed by medieval cisterns.[3] In areas 4–6, however, the rock falls away steeply towards the west, and above it lay a deposit of 1½ to 2½ m. of earth. Here, in spite of the disturbance caused by the sinking of later walls, the most significant finds of the whole campaign were made.

Votive Deposit.

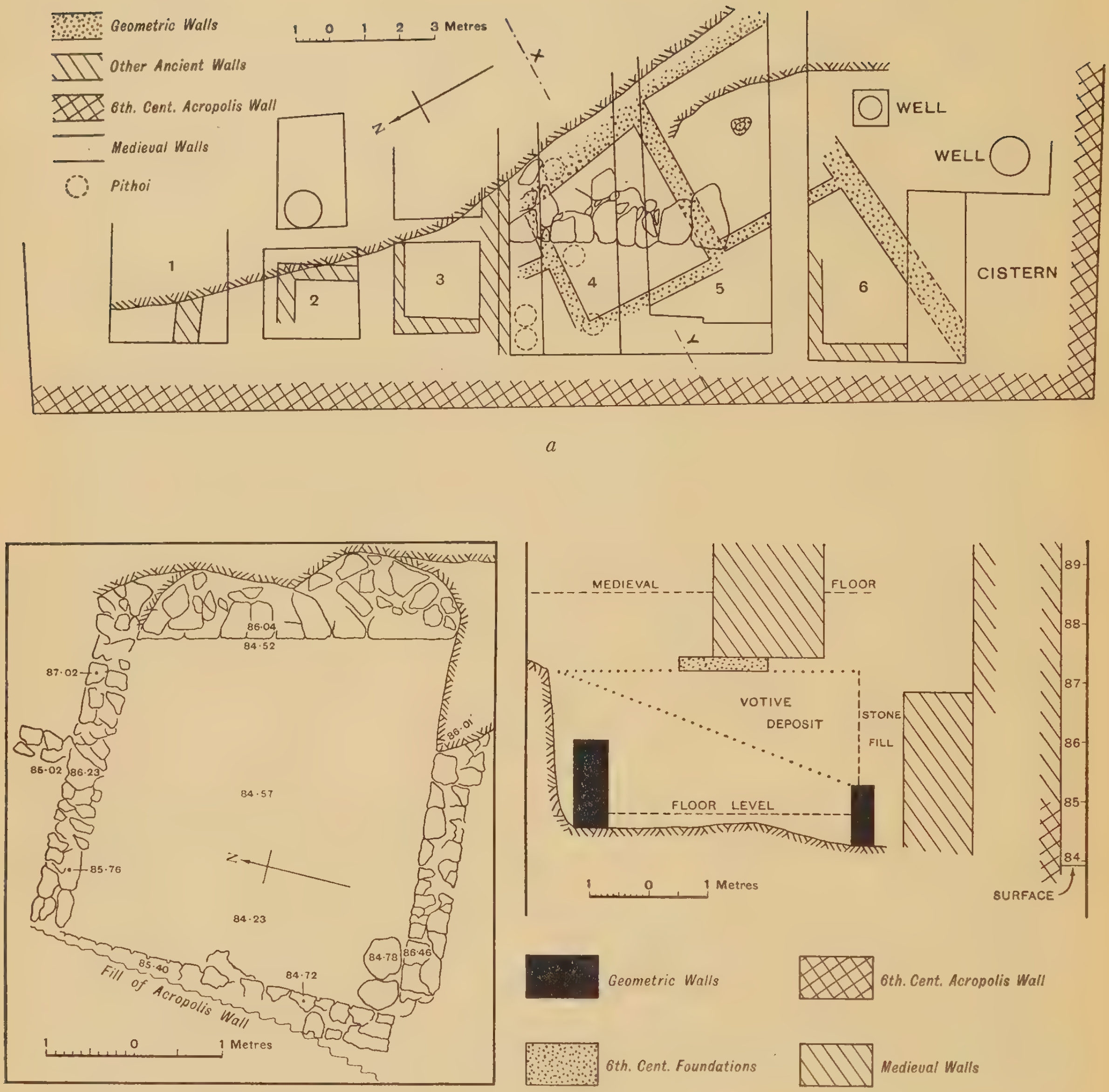
At 87·2 m.,[4] about 1·3 m. below the medieval stone-flagged floor, the first ancient foundations came to light. They consist of a line of large flat blocks of schist running parallel to the north-west end of the acropolis wall and set back about 4·5 m. from it (Pl. 3. 4). Under these foundations, and for some distance all round at the same level, a comparatively rich deposit of seventh-century pottery, ivory, and bronze was found—clearly a votive deposit from a temple. The strata containing votives alternated with strata of schist and marble chippings to a depth of about 1·7 m. A deposit of exactly similar character, but less extensive and partly contaminated by later disturbance, was found immediately outside the north-east wall of the acropolis.[5] It is clear then that in the seventh century a temple stood

---

[3] The plan shows some disconnected foundations in this area which probably date from the late sixth or early fifth century.

[4] Measurements in this section are given in metres, levels in height above sea-level.

[5] Pottery and other objects such as terracotta figurines which must have come from this deposit were also found farther down the hill in the trenches YA, YB, YC.


Geometric Walls
Other Ancient Walls
6th. Cent. Acropolis Wall
Medieval Walls
Pithoi
1 0 1 2 3 Metres
N
X
Y
1
2
3
4
5
6
WELL
WELL
CISTERN
86·04
84·52
87·02
86·01
85·02
86·23
84·57
85·76
N
84·23
84·78
86·46
85·40
84·72
Fill of Acropolis Wall
1 0 1 Metres
MEDIEVAL
FLOOR
VOTIVE
DEPOSIT
STONE
FILL
FLOOR LEVEL
89
88
87
86
85
84
SURFACE
1 0 1 Metres
Geometric Walls
6th. Cent. Acropolis Wall
6th. Cent. Foundations
Medieval Walls

a

b

c

FIG. I.—BUILDINGS ON THE ACROPOLIS.
a, General plan; *b*, plan of geometric house; *c*, section X–Y of plan *a*.

somewhere higher up the rocky slope—perhaps even as far as the summit, where a church stands today. The deposit can be dated by its contents to the period 700–550, but it included one or two objects which can hardly be earlier than the last quarter of the sixth century.[6] From this I infer that the earth round the seventh-century temple was shifted towards the end of the sixth century at a time when the acropolis was being expanded. The schist blocks may mark the limit of the extended temple precincts. Resting as they do on loose dumped earth they could hardly have supported more than a low retaining wall. The chips of marble which are mixed with the votive deposit suggest that the old temple was being replaced by a new marble one. Alternatively, they may have come from blocks which were being prepared for the acropolis wall, if I am right in believing that it dates from this period. As I have already stated, we were unable to find any positive evidence of its date owing to the intrusion of so many medieval foundations in its vicinity. Our estimate receives considerable support, however, from the fact that the brown earth associated with chips and mainly seventh-century pottery, which is characteristic of the deposit just described, continues, at the one point where it has been undisturbed, at the same height right up to the acropolis wall (Fig. 1*c*). This indicates that the whole deposit was dumped and levelled off at this height at the same period. It must have been held up by a retaining wall at about this point or else the outer edge would have been quickly washed down by the rain.[7] It seems unnecessary to invoke the existence of an imaginary wall which has since disappeared. The obvious explanation is that these levelling operations took place when the marble wall was built, the hollow caused by the declivity at the west corner being filled up with the temple dump.

Miscellaneous Walls.

Further chronological problems are provided by an ancient wall which separates areas 3 and 4. It runs from the ledge of rock where the schist foundation blocks end to the outer acropolis wall and at right angles to these two constructions. Its foundations are on rock (at about 84·5 m.) and from here to 86·7 m. it is of rough polygonal construction. At this level there is a levelling course of schist slabs and above this the construction is irregular ashlar. The wall is later than the brown-earth deposit described above and pre-Hellenistic, as will be shown below, but apart from this we found no evidence by which it could be dated. The combination of polygonal with irregular ashlar suggests a date in the first half of the fifth century, according to the criteria collected by Scranton in his study of Greek walls.[8] It was built no doubt to support the south-west wall of a building in the north corner of the acropolis.

---

[6] The almost total absence of votives after 550 can be explained by the supposition that temples were spring-cleaned at comparatively long intervals. The votives of the living generation would thus be still housed in the temple; only occasionally would a broken object be added to the rubbish heap.

[7] It might of course have extended farther than the marble wall, assuming the latter to be later in date; but in that case the marble wall was designed to include a smaller area than existed before. One would naturally expect expansion rather than duction.

Contemporary or later than this wall is a series of large pithoi, five of which were found *in situ*[9] while fragments of others occurred elsewhere in area 4. Two of them were close up against the fifth-century wall; the other three had been sunk in the brown-earth stratum farther to the south. They were used presumably for storage, but whether in a building or an outhouse it is impossible to say.

Immediately above pithos II a short cross wall was found orientated on a different ground plan from the walls so far described.[10] It could be dated fairly definitely by the associated pottery to the Hellenistic period. This is in fact the only trace we found of any Hellenistic building on the acropolis.

The medieval wall which surmounted the fifth-century wall was very poorly aligned. As will be seen from the plan, the greater part of its width rested on the earth and not on the substantial earlier wall below. Three of the pithoi were found immediately underneath it. Similarly the medieval wall between areas 4 and 5 went no deeper than the level of the large schist foundation blocks.[11]

Geometric Houses.

At the bottom of the deep pocket of earth enclosed by the acropolis wall at its west corner we were fortunate in finding in a remarkable state of preservation the remains of two or perhaps three houses of the Late Geometric period. These were built close up against and roughly in line with the rocky cliff which, as already mentioned, runs diagonally across this corner of the acropolis. As will be seen from the plan (Fig. 1*b*), the central house, which is approximately square,[12] has all four walls preserved. Pl. 4. 1 shows the inner (east) wall backed against the cliff. The inner corners are formed by two spurs of rock on which the side walls rest at their inner end. Of these, the north wall is the best preserved, its top at the inner end (87·0 m.) having been protected by the schist foundation blocks immediately above. It contains a curious alcove, about half a metre square, just above the spur of rock from which the wall springs (Pl. 4. 2). The bottom of this would have been about 1·2 m. above the floor, at a convenient height therefore for a shelf—perhaps the earliest example of a built-in cupboard.

---

[8] R. L. Scranton, *Greek Walls* (Harvard U.P., 1941). The surface of the two sections of our wall are what Scranton would, I think, describe as hammer face.

[9] Levels: I, 87; II, 86·7; III–V, 86·5. IV and V are visible in Pl. 3. 4; the other three were found in the test trench in 1935.

[10] It made an angle of 100° with the fifth-century wall. For the sake of clarity it has been omitted from the plan.

[11] Pl. 3. 4 shows areas 4 and 5 after this wall had been removed.

[12] The sides vary between 8·5 and 10·5 m. in length.

This same wall has another curious feature at its other end. 0·8 m. from the north corner a hole (0·2 wide and 0·15 high) has been left in the wall. The bottom of it, which is approximately at the ancient floor level,[13] projects about 8 cm. into the house, as does the upright stone forming its left-hand edge (Pl. 4. 3). On the outer side of the wall and parallel to it a narrow channel grooved in the rock leads into the hole (Pl. 4. 4; Fig. 2). Upstream, so to speak, from the hole, the outer edge of the channel is made higher by a schist slab (0·6 long) laid on its side.

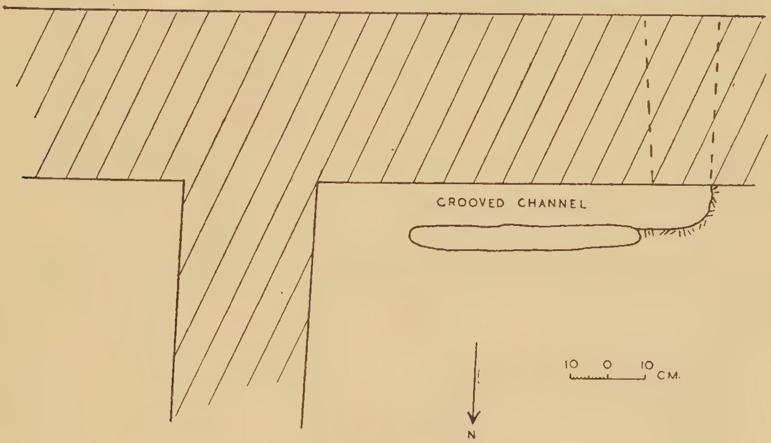


Fig. 2.—Channel through Wall of Geometric House.

What is the explanation of this curious contrivance? The only one that occurs to me is that rain water from the roof was directed into the runnel outside and collected in a vessel inside the house.[14] If so, the vessel must have been a low one because there is a ledge of rock only 0·2 m. below the hole. It would also have rested below the level of the floor if we are right in estimating this at about 84·7.[15] Neither of these conditions seems to me unlikely.[16] It also follows that the area outside the wall was out of doors. This seems likely, since the cross-wall immediately east of the runnel is probably the outside wall of another house situated rather farther up the slope. This

[13] The bottom of the hole is 84·73 m.; the grooved channel outside 84·79 and the top of the schist slab 85·06.

[14] The greater part of the water supply of the modern village is rain water collected in cisterns from the roofs. The nearest spring in the valley is a weary trapse 300 ft. down and up again.

[15] The floor stratum was unfortunately not clearly defined, but could be inferred at two points as will be explained later. It would of course be unreasonable to expect the floor of a Geometric house to be nearer level than the pavements in modern Athens.

[16] The possibility that the hole could be used for the passage of liquids in the other direction, *e.g.*, for emptying slops, is ruled out by the levels. The slab outside would also be pointless.

raises the question of roofing. If both houses had pent roofs the rain water would naturally run down more freely at just this point. But it would be unwise to press this argument. A flat roof would probably supply all that was needed and is, I think, intrinsically more likely, especially if, as at the present day, advantage was taken of local materials, *i.e.*, flat slabs of schist laid on wooden beams.

In the south-west corner of the house there are two round schist slabs about one metre in diameter (Pl. 4. 5). Whatever their purpose (perhaps flat bases for storage pithoi or other household stores) it is probable that their level (84·78) is that of the floor. This is confirmed by the presence of fragments of cooking pots and a quantity of loom weights at the other end of the house only a few centimetres higher.

The entrance to the house must have been in the west wall somewhere between its mid-point and the south-west corner because everywhere else the walls are preserved to a considerable height above the floor.[17]

The southern wall calls for no comment except that, unlike any other wall of this period, it includes a few blocks of local marble.[18] This wall is shared by another house to the south, of which only two other sides are partly preserved. The floor level of this house was 1·2 m. higher than that of its neighbour, that is to say at the level of the top of the spur of rock upon which the wall just referred to abuts. This is shown by the fact that the faces of its north and west walls are not dressed below this level, and confirmed by the presence at the middle of the house and at this height of a small flat round stone resting on a larger schist slab.[19] On the analogy of other early buildings this was probably the base for a wooden post supporting the roof beams. Additional confirmation of the high floor level was given by the stratification, the votive deposit being replaced by an earlier stratum just above this level and about half a metre higher than in the house previously described.

Pl. 4. 6 shows the back wall built up against the cliff. The edge of the rock ledge below is built up at its southern end. Similar ledges were found in two of the other Geometric houses on the north-east slopes of the acropolis. They have been found in early houses at other sites [20] and were probably used as beds.

---

[17] It is of course just possible, though very unlikely, that the house was entered by a wooden ladder from a door more than half a metre above the floor.

[18] Marble may have been purposely avoided in order to render the village less conspicuous to sea raiders. One can imagine that these houses, built of the same material as the cliffs under which they nestle, would have been completely invisible from seaward except to a vessel navigating close inshore. It is worth noting that the wall in question is a party wall between two houses, and would therefore not be visible from outside. But this may be an over-ingenious explanation of what was probably a fortuitous choice of materials.

[19] The level of the stone base is 86·13 m. and the slab below 86·04 m.

[20] *E.g.* in the Agora at Athens: *Hesperia* II, 547, where prehistoric parallels are cited.

To the south the house was bounded by a wall much thicker than the average (0·7 instead of about 0·4), the prolongation of which is preserved in area 6. Its junction with the west wall of the house is intact, but beyond this point its inner end has been destroyed by the medieval foundations. Judging by its size and length this must have been an outer circuit wall protecting the village. On both sides of it in area 6[21] unusually good specimens of Geometric pottery were found, most of it rather earlier than that found in the houses. The boundary wall of the village would of course be a natural dumping place for broken pots, although the possibility cannot be ruled out that the sherds were there before the wall was built.

Mention should be made of some foundations on the north-east and north-west side of area 6 on the same alignment as the marble acropolis walls. A few associated sherds of good black glaze indicate a late sixth- or early fifth-century date.

The construction of the Geometric walls is invariably excellent, as may be seen in the illustrations.[22] Long slabs of schist, roughly dressed on their outer faces, are laid horizontally so as to form irregular courses, the crevices being packed with small chips. Sometimes the resulting wall face is so flat as to give the appearance of a vertical face of weathered rock. Only very occasionally was other stone used as building material. The north wall of the centre house has a few blocks of dark pock-marked stone with rounded edges. A few small pieces of this stone were found inside the house, and may have been used as pestles. The exceptional use of marble in the opposite wall has already been referred to.

The date of the acropolis houses can be estimated roughly by the pottery found within them—or, to be more exact, by the pottery found in the central house, which was the only one to escape contamination at its lowest levels. It is difficult to give absolute dates because we do not know enough about the development of Cycladic Geometric pottery. It may be said without hesitation, however, that the sherds found in the central house are considerably earlier than anything found in the votive deposit.[23] They are also rather earlier than the pottery found in the houses on the north-east slope of the acropolis, which are described below. On the other hand, they are not as early as the bulk of the sherds found in area 6. The latter must be at least as early as the beginning of the eighth century. Those from the house I should place in the second or third quarter. This suggests a date not later than about 750 for the construction of the house.

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[21] The area outside the wall was badly disturbed by the intrusion of a cistern and two wells of medieval date.

[22] In Pl. 4. 5 contrast the Geometric wall in the foreground with the motley medieval wall behind it.

[23] The following examples are published in the catalogue: oinochoe 1 (Pl. 12. 20); lid 5 (Pl. 13. 24); crater 9 (Pl. 14. 29); skyphos 13 (Pl. 14. 16). The Protocorinthian aryballos 2 almost certainly belongs to the votive deposit; it was found about 0·3 above the estimated floor level.

Doric Column.

Before leaving the acropolis it remains to describe a fragmentary drum from a Doric column which was found in 1935 among the fallen masonry in this area. Apart from an occasional piece of marble tile and shapeless lumps of marble which may equally have come from the acropolis wall, this is the only evidence we found that fine buildings once stood on the site. We had expected to find at least one or two fragments of mouldings or an occasional worked block built into the foundations of the medieval wall. Such complete annihilation has, however, only too often been recorded in other parts of Greece.

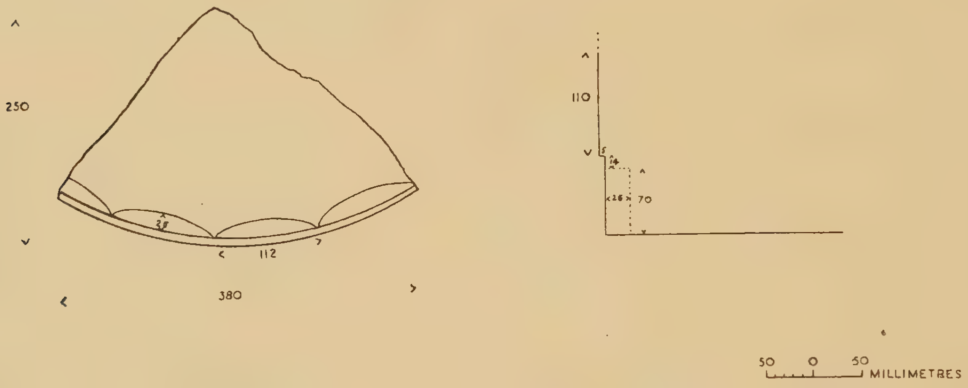

Fig. 3.—Sketch Plan and Section of Fragment of Doric Column.

Only a small segment of the drum is preserved (Pl. 5. 5; Fig. 3).[24] It is fluted for a height of 0·7 from the base. Next comes a plain ring, 0·014 high and flush with the edge of the arrises. Above this and up to the point where it is broken off, the drum is cylindrical with a roughly chiselled surface. The diameter of the cylindrical part is 0·01 greater than that of the fluted part. Owing to the small size of the fragment it is not possible to be certain about the number of flutes.

Almost exactly similar drums were found in the fifth-century temple of Apollo at Delos,[25] which has already been mentioned in connection with the acropolis wall. In Delos the partial fluting is explained by the supposition that the columns were never finished, and this is probably the explanation here also. Orlandos, however, in describing similar columns from the temple of Zeus at Stratos,[26] states that in Hellenistic times fluting was restricted for reasons of economy. It is of course just possible that our fragment dates from the Hellenistic period, but a fifth-century date is, I think, more probable on the analogy of the temple of Apollo at Delos.

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[24] Upside down in the photograph.

[25] *Délos* XII, fig. 17.

A larger fully fluted Doric column drum, described below, was found near the river bed at the foot of the Kastro hill. This is almost certainly of early date, so that we may infer that the Doric style was already firmly established in Siphnos. Weickert[27] remarks on the equally surprising appearance of Doric in Paros (the Delion) during the first half of the sixth century.

North-east Slope of the Acropolis.

On the north-east slope of the acropolis overlooking the sea, further remains of buildings of the Geometric period came to light. That these were also houses is fairly certain, though unfortunately, owing partly to the steepness of the slope and partly to disturbance caused by later builders, no complete plans were preserved.

At the present day the slope is terraced, but the land is no longer cultivated, and the terraces are falling into disrepair. For the most part there is little depth of soil, but in three places there were deep clefts between the rock where foundations of ancient buildings were found.

In YB (Pl. 5. 1; Fig. 4*b*) the corner of a house is preserved. The two walls are built close up against vertical faces of schist. The side wall is about one metre, the back wall rather less than a metre thick. They are preserved to a height of about one and a half metres. They are of the same excellent construction as those already described on the acropolis.

The side wall is destroyed at its outer end by the modern terrace wall. The back wall is cut by a Hellenistic wall. Parallel with the back wall and at a height of 40 cm. above the floor level is a ledge built of stones rather smaller than those in the walls and including one or two of marble. The top was covered with flat slabs of schist. The inner corner of this structure is a natural ledge of rock. Like the ledges found in other houses it probably served as a bed.

Close to the Hellenistic wall and 1·5 m. away from the ledge was a hearth consisting of a circular patch of baked red earth about 0·5 m. in diameter. Beside this was the lower part of a large amphora, part of which was destroyed by the Hellenistic wall and built into its foundations.

Within the area enclosed by the two early walls and the Hellenistic and modern terrace wall there was a pure deposit of Late Geometric and early seventh-century pottery about half a metre deep. A similar deposit continued for a short distance on the other side of the Hellenistic wall, though here it was pure only immediately above virgin soil.

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[26] *A Delt* 1923, 7.

[27] *Typen der archaischen Architektur*, 103. Doric temples in Delos from 540 to 450 B.C. are listed by R. Vallois, *L'architecture hellénique et hellénistique à Délos*, 128 f. T. J. Dunbabin kindly drew my attention to this book.

Before proceeding to describe the walls in YC the remains of other buildings in the YB trench may be briefly mentioned. The Hellenistic wall has already been referred to. Immediately north of it was a pithos, but the only other wall which might be connected with it is not parallel. The whole of this area is too disturbed to allow any exact identification, but from the associated pottery it appears that the wall just referred to is Roman and those farther north in a cleft between rocks are fourth century.

In the terrace immediately above and a little farther to the south, more extensive remains of early buildings were found. In YC, under some Roman walls at the south end of the trench, the foundations of another Geometric house came to light (Pl. 5. 2; Fig. 4*a*). Three sides only are preserved, the enclosed area being about 5 m. square. As usual the back wall is built close up against the rock. The two side walls are not quite parallel, but follow the line of rock ledges which run out at right angles to the contour of the hill-side.[28] The walls are built of schist as before. The back wall is preserved to a height of about 2 m., the south wall 1 m., and the north wall half a metre or less. The outer end of the house was destroyed by a modern terrace wall. In the south-west corner there was a hearth consisting of a flat slab of schist resting on some smaller stones and surrounded by a layer of red earth 2–3 cm. deep. A sandy stratum at this level (66·3–66·2 m.) and the remains of cooking pots confirmed that the floor was about 20 cm. above the natural rock. At the same level, two flat stones covered with grey ash were found about the middle of the house, perhaps indicating that the roof of this house like that on the acropolis was supported by a central post.

It will be observed from the plan that the back wall is not carried right up to the south-west corner, but that from this point another wall at a slightly higher level runs along the rock face at an angle to the house wall (Pl. 5. 2). This may be a retaining wall to protect the house from landslides caused by heavy rain or possibly the outer wall of another house situated immediately above. What may be a continuation of this wall was uncovered under some fallen boulders farther to the north.

The only other feature worth mentioning in this area was a small cistern, dating from the fifth century or later, consisting of a hollow in the rock to

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[28] It is hard to say whether, both here and elsewhere, such projecting spurs are a natural formation or whether they may have been formed artificially by quarrying the stone of which the houses are built.

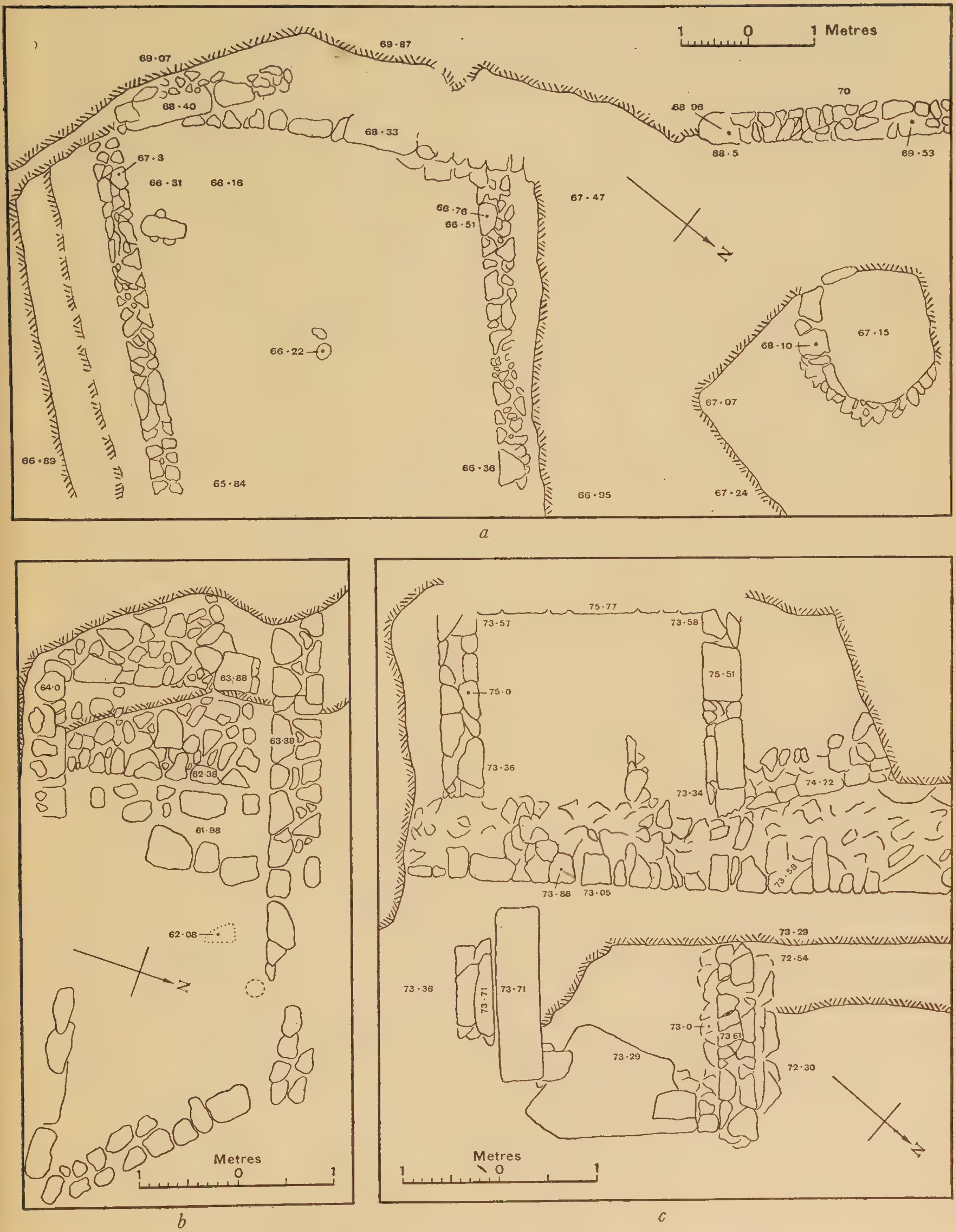
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FIG. 4.—GEOMETRIC HOUSES ON THE NORTH-EAST SLOPE.
a, YC; *b*, YB; *c*, YD.

the north of the Geometric house, the outer edge of which was built up with a circular wall of closely packed small stones.

Special efforts were made in YC to observe the stratification more minutely than usual. The area was dug in small strips, and the pottery from these was segregated at 10 cm. intervals of depth. Unfortunately our precautions were ill rewarded, since, apart from the confusion caused by the steep and varying slope of the hill-side, the whole area had been disturbed not only by the construction of the cistern and Roman walls referred to above but also by the intrusion of a large modern pit filled with miscellaneous pottery of all ages. At the inner end of the Geometric house, however, a relatively pure stratum could be isolated about three quarters of a metre above the floor level. The upper part of this stratum contained early seventh-century pottery while immediately above the floor the sherds were of a generation earlier.[29] Below the floor level still earlier sherds, dating from the middle of the eighth century or earlier, were found, but these may possibly antedate the house. It would be safe to say then that this house was built not later than the last quarter of the eighth century and continued to be occupied until the end of the first quarter of the seventh century.

In YD farther to the south a fourth Geometric house was found (Pl. 5. 3; Fig. 4*c*) again built into a cleft between two projecting ledges of rock. The back wall is built close up against the rock face and is preserved to a height of about 2·2 m. The side walls, which are 0·4 m. wide and about 2 m. high at their inner ends, are preserved for about 2 m. of their length. Their outer ends have been broken by a substantial terrace wall which, judging by the absence of later sherds, appears to have been constructed not later than the middle of the sixth century. About half a metre farther out, that is to say beyond the trench excavated by the builders of the sixth-century terrace wall, the side walls continue. Only a fragment of the south wall is preserved, but the north wall continues for another 2 m. This part of the wall is not built directly on the rock, which at this point slopes down fairly steeply in a series of ledges, but rests on a slightly wider platform of stones, which were evidently packed into the bottom of the construction trench to give a more solid foundation. The north wall is broken off again at its outermost end, this time by the modern terrace wall. Up to this point there is no certain indication of a return wall, so that the dimensions of the house (measured internally) are 2·3 by not less than 5·5 m.

Within the house at the topmost levels there was a quantity of schist which had presumably fallen in from the upper courses of the walls. There was nothing to show how the building was roofed. The floor level was not clearly defined, but could be inferred approximately from the position of two pithos bases which were found near the back wall, about 0·2 m. above the rock. One of these rested on a flat slab and was wedged all round by chips of schist. It contained a quantity of ash.

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[29] *E.g.*, the amphora fragments 1, 9, in the catalogue below. The former was found under the schist slab on the hearth.

Farther out, alongside the fragmentary south-wall extension lies an immense rectangular stone slab, 1·8 by 0·4 m. Its inner end must have projected into the trench dug by the builders of the sixth-century terrace wall, but they were naturally unable to dislodge it. The upper surface of the slab is, if anything, a fraction below the estimated floor level, but the floor may well have followed the natural slope of the hill-side. Assuming that the floor was 0·2 m. above the rock, the slab would have been at about the same height as the ledge in the YB house (*i.e.*, *c.* 0·4 m.). Its dimensions are certainly suggestive of a bed. It might, of course, be argued that it is not in its original position, but that it fulfilled some constructional purpose, such as a lintel. If this were so, it seems incredible that it should have fallen level and in exact alignment with the wall.

Evidence for the date of the house was provided by the pottery found in a pure stratum at the inner end at about the estimated floor level. Most of this was Late Geometric, but developed Melian orientalising fragments also occurred. One may infer therefore that the house was built during the last quarter of the eighth century and continued to be inhabited until the middle of the seventh century.

Outside the sixth-century terrace wall the pottery was naturally varied, but it included a relatively concentrated deposit of Middle Cycladic, chiefly grey Minyan, sherds, which must have been dislodged from somewhere in the immediate neighbourhood by later builders.

The walls of the Geometric house are of the same regular construction as those already described. Pl. 5. 3 shows how the use of long slabs of schist gives the impression that the walls are built in courses. By contrast the sixth-century terrace wall is rough and irregular. Its face is uneven, and the haphazard selection of stones, including blocks of marble, gives it an untidy appearance.

At the point where the north wall is broken by the sixth-century terrace wall a short retaining wall, probably of contemporary date, abuts on its outer face and runs at rather less than a right angle to the ledge of rock which forms the northern edge of the cleft. Other retaining walls were found farther up the rock face which is here precipitous. Most of these are of similar style and are probably pre-sixth century.

On a ledge of rock rather more than 2 m. above the top of the back wall of the Geometric house and about 2 m. farther back in the horizontal plane two side walls of another house are preserved for a length of just over a metre. The house is orientated in the same direction as the Geometric house below, but its width is slightly greater (2·8 m.). Midway between the two walls is a square hearth (side *c.* 0·5 m.) consisting of a heap of ash bounded by small upright chips of schist. The associated pottery suggests that the house belongs to the first half of the sixth century.

South-west Slopes of the Kastro Hill.

The excavations on the other side of the Kastro hill can be dealt with more summarily.

In the fields above the path from Apollonia, just before it reaches the col, an ancient cemetery was once situated (Q). The graves we found had all been rifled or destroyed by cultivation, but an abundance of sherds showed that the cemetery had been in continuous use from the seventh century down to Roman times

On the landward side of the col, some wide terraces are bounded at their south end by a wall which follows the line of an ancient fortification. This is still visible in places above the surface, and we were able to follow its course for about 40 m. down the hill-side. Excavations at its lower end showed that there was a curved bastion at this point. As will be seen from the illustration (Pl. 5. 4) the wall is constructed of large blocks of schist, now very badly weathered, apparently in pseudo-isodomic ashlar style. The foundations, where we uncovered them, consist of smaller blocks of irregular ashlar, again with a pseudo-isodomic tendency. The pottery from test pits outside the wall (A, B) was mainly classical; from inside (G, H) Hellenistic and Roman. No sherds were found in the fill of the wall, but its date may be reasonably inferred from the construction to be Hellenistic.

Part of an exactly similar fortification is visible in a terrace wall just to the west of the Aghios Taphos enclosure. Test pits here (L) produced more Hellenistic pottery but also some sixth- and fifth-century sherds. The fill of the wall itself was again unproductive.

Half-way along the south-west slope a trench (E) dug in the alluvial soil enclosed by a wide terrace immediately above the river bed produced a collection of miscellaneous objects including a pellet and small bar of silver, a headless draped marble statue, and a marble Doric column drum (Pl. 5. 6). The latter is 1·589 m. long and roughly 0·75 m. in diameter, the diameter at one end being slightly greater than at the other. It has sixteen flutes. The details of the two ends are shown in the drawings (Fig. 5). The smooth joining surface is exceptionally wide. The inner part is roughly tooled and is set back 0·016–0·017 from the dressed face. The depth of the small central hole is 0·035, measured from the dressed surface.

Sixteen flutes are an early feature according to Professor Robertson,[30] so that, unless the other details provide evidence of which I am unaware, we may assume that the drum came from an archaic building. There is no sign of early foundations in the vicinity, but it is difficult to imagine that the drum can have rolled from very far up the hill. If it had it would surely have suffered more damage than it has done.

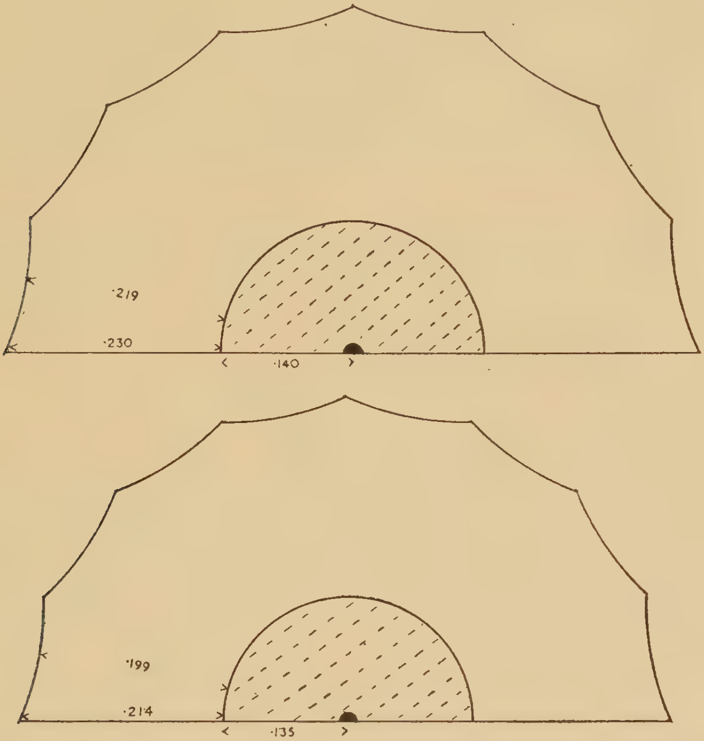

Fig. 5.—Details of Doric Column Drum from Trench E.

At the inner end of the trench we found the foundations of a Roman retaining wall and in the field above (F) a drain, also of Roman date, consisting of a groove cut in the rock and covered with schist slabs. Close by a pocket of soil in a cleft of rock contained a quantity of Geometric and seventh-century sherds, showing that the settlement at this time was not confined to the summit and seaward slopes of the hill.

Immediately above this again (K) the foundations of a Roman building were uncovered. This was probably a house or pottery shop, since a large amount of good quality Late Roman A ware was found here.

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[30] *Greek and Roman Architecture*, 41, n. 5.

On the south slope of the hill below the village school and overlooking the harbour, a series of trenches (J) revealed the foundations of some late Hellenistic and Roman houses. J 2 produced a quantity of early Hellenistic sherds and many fragments of wine amphorae with stamped handles.

Farther round the hill by the chapel of St. Anthony some marble blocks in line show that an ancient building once stood here. The rock here is near the surface, so that test pits proved unproductive.

Other excavated areas are shown on the map or are noted below. They produced nothing worth recording, but in general it may be said that in almost every trench on the Kastro hill and even in the terraces beyond the river-bed opposite E, traces of ancient inhabitation were found, usually in the form of sherds ranging from Geometric to Hellenistic and Roman times.

Finally, reference must be made to an ancient site situated about half an hour's walk from Kastro on the road to Pharos.[31] A series of test pits showed that there was a small settlement here which was continuously occupied from the seventh century [32] to Roman times.

Notes on the Map

The following excavated areas are not shown on the map:

K. A small trench above F, accidentally omitted.

L. Four trenches in the fields west of the Aghios Taphos (bottom left corner of the map) in the vicinity of an ancient wall similar to that at A.

M. On the hill due south of Kastro, bordering the road to Pharos (marked 'ancient cemetery,' bottom right corner of map). Seven fields containing ancient graves were systematically trenched throughout their length.

Q. Six trenches in the fields immediately above the road from Kastro to Apollonia, a short distance off the map to the north-west.

R. Five trenches in some fields belonging to the Rapheletos family above the road to Pharos, about half an hour's walk from Kastro.

Five trenches in the bottom field but one on the opposite side of the stream to E, and one trench in each of the two terraces above.

Trench by the ancient wall near St. Anthony.

II. SMALL FINDS [33]

Nearly all the finds published here, except those in sections F and G, come from the votive deposit on the Acropolis. The provenance of individual objects is given only when they come from another part of the Acropolis or from a different area on the site.

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[31] The property belongs to the Rapheletos family of Kastro.

[32] One Mycenaean sherd was also found.

[33] Measurements in this and the following section are in millimetres.

A. Terracotta

1. Pl. 6. 1–2. Female statuette in vase technique. Preserved ht. 237. Diameter at base *c.* 94. Thickness of wall at base *c.* 15; at top 8–10. Clay pale grey to pink, fairly pure but with a few small pieces of grit. Smooth grey surface, black varnish. Most of the front of the figure is oxidised; the surface is pink and the varnish red. Most of the lower part of the back of the skirt is restored. The bottom edge of the figure is flattened out and left rough. The skirt is slightly flared at the foot. Above the waist, only the back is preserved: framed by a line, long squiggles and dots, representing hair. The point of attachment of the right arm is preserved.

Raised waist-band. Black line at top and bottom edge. Blunt incised zigzag, the grooves varnished.

Skirt: below a line, dotted lozenge chain with dots in the interstices. Four lines. Frieze (ht. 39): horses to right, their heads rendered by elongated loops. Filling of lozenge cross, zigzag column, pendent and standing triangles. Four lines. Similar frieze (ht. 61). Besides the ordinary fill, a black hour-glass above the rump of one of the horses; in front of the same horse, double lozenge cross forming a lozenge column. Four lines. Band of horizontal S. One line.

Fabric and style as *Délos* XV, Group Ad. First half of seventh century. For a general discussion on the type and signification of the figure, see on the next.

2. Pl. 7. 1–3; 8. 4–5. Similar statuette. Ht. to top of waist 405. Diam. at waist *c.* 57; at foot *c.* 120. Thickness of wall at foot 15. Greenish yellow clay, very friable and with a lot of grit. In many places, where there is a particle of grit near the surface, it has chipped off. Creamy slip, mostly greenish. Varnish lustrous where at all well preserved; black to delicate red.

The figure is preserved up to the waist only. The upper half of the front is also missing.

The front of the dress is divided by a central pattern stripe which gets gradually wider towards the bottom (15–22). Roughly speaking it is a pattern of 'concentric' squares. Analysed, there are three verticals, making two columns. Each column is divided into squares by double horizontal lines, the lines in one column being half-way between those in the other. Within these squares is another square, and, within that, a horizontal blob. (Vertical if the square has got out of shape.)

On either side are panels with animals facing each other, the pair at each level being alike. The heights of the panels are (top to bottom): 38—35—43—44. Those on the left get wider (39–48), those on the right a little narrower (38–36). The bottom lines of the winged-horse panels do not correspond, the lines being not quite straight.

A. (Bottom only preserved.) Felines. The left-hand one has its right-hind leg advanced —shown by a fine reserved line round the haunch. Its chest is reserved, with markings which must represent the mane.

B. Griffons with rather straight long wings. Behind their heads, a spiral. In front of the ear, a three-pronged boss. Large reserved eye with dot in centre (as on all the animals). Rather curly beak. Legs as horses, the left-hind leg advanced (left-hand griffon). Covert of the left-hand griffon reserved and dotted. That on the right-hand griffon is similar but smaller.

C. Winged horses. Outline curling mane. Sweeping contour for front of head. Wings shorter than griffons' and with inner markings. The lower jaw of the left-hand horse droops in the manner of the protome amphorae. (*Délos* XVII, Group C.) On the left-hand animal the tail rises before dropping; on the right-hand it falls directly, owing to limitation of space.

D. Winged griffons as before. As in B the coverts are dotted, and here again the covert is better rendered on the left-hand animal. The right-hand griffon has a more scalloped wing and inner markings like a horse's mane. Its tail is rather constricted.

E. Almost invisible. Lions with reverted heads. Four legs on ground. Tails curl back, reaching almost to mouth. Flame tongue as on the protome amphorae. Mane reserved with inner markings. Of the left-hand animal, only the tail, top of head and ear, and front paw remain.

At foot, narrow frieze (*c.* 10) with curvilinear design (? cable) interrupted by central stripe.

Sides: left-hand (viewed from the front) 37, right-hand 30 wide. On left side, six standing S spirals. Vertical tangential lines on either side of the S, curving outwards at their free end. In the angle between tangent and spiral, three-leaf palmette. The bottom one is short and has only one leaf. Between each S, double horizontal palmette of three leaves; three-line binding. On the right side the S's are reversed. The spirals are shorter, and there is only one leaf between tangent and spiral.

Back: labyrinth. The basic principle consists of a horizontal line at the centre from which steps rise upwards to right and left. This pattern is continued upwards until the central trough is narrow enough to be filled by a single vertical line, after which the series starts afresh.

Top, below waist, outline tongues. (*c.* 13.)

Waist-band, maeander. (*c.* 11–12.) Slight ridge below.

Foot very slightly flared with vertical strokes. (15.)

This figure is a typical product of Naxos. The resemblance to the Naxian heraldic amphorae in Mykonos (*Délos* XVII, pls. 1 ff.) is very striking, not only from the point of view of fabric, style and repertoire, but also on account of the extraordinary elongation of the figure, which exactly corresponds to the exaggerated tall, slim shape of the amphorae. Other similarities of drawing and design are too numerous to mention. It is perhaps worth while to draw attention to the typical rendering of the inner contour of the feline's hind leg (cf. *Délos* XVII, pl. 5. 10*a*). The treatment of the griffons' wing coverts has parallels in other Cycladic groups (*cf.* winged horses on unpublished Melian vases in Mykonos). I refer later on (in the discussion on the chronology of Cycladic vase painting, pp. 74 ff.) to the striking resemblances in certain details of drawing to the protome amphorae in Mykonos (*Délos* XVII, Group C).

The date of this figure must be slightly later than that of the heraldic amphorae. I place it about the beginning of the second quarter of the seventh century. (My reasons are given in the discussion on chronology.)

Figurines in vase technique are not unknown, though not common, elsewhere, but I know of no others which compare with ours in size and elaboration. The following examples may be cited: Cypriot: Winter, *Typen*, 14 (Heuzey, *Louvre Cat.* 1923, pl. IX, no. 3). East Greek: Camiros, *B.M. Cat. Terracottas*, B 134 ff.; *Aegina* I, 379, no. 62; *Thera* II, 24, fig. 56; Chios, *BSA* XXXV, pl. 33, 15; *Lindos*, pl. 82, 1877; perhaps the head from the Samian Heraeum, *JHS*, 1933, 287, fig. 13. Boeotian:[34] Winter, *Typen*

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[34] For the latest discussion on Boeotian bell-shaped figurines see F. R. Grace, *Archaic Sculpture in Boeotia*, ch. 1.

9, 32. Argive, Corinthian: *Argive Heraeum* II, 27, 107; *Perachora*, pl. 87, no. 4. Laconian: *BSA* XXIX, pl. I (Jenkins, *Dedalica*, pl. 1. 1), a head which may have come from a figurine of this type. The decoration on these, if any, is confined to simple linear designs or, more usually, a plain coat of varnish.

Both figures probably stood on bases (*cf.* Winter, *Typen*, 32, 1). There is no sign of attachment of the hands to the sides, so that the arms must presumably have been held forward. In any case, technical difficulties would have arisen if the hands were to touch the body, either at the sides or clasping the breasts. One may suppose that in other respects these statuettes, in their original state, would not look very different from the cult statues of the period.

It remains to consider who these two figures represent. There can be no doubt, I think, that they are goddesses. Unfortunately the votive deposit gives no clue as to the identity of the divinity to whom its contents were dedicated. The terracotta helmet crest (no. 3 below) may or may not have belonged to a figure such as these. If it did the goddess could hardly be other than Athena.[35] The fact that other fragments of helmet crests were found tends to support this interpretation. Artemis would be a likely alternative in the Cyclades, and we learn from Hesychius that Artemis Ekbakterias was worshipped in Siphnos. The designs on the skirt of the Naxian figure would certainly be appropriate to Artemis, but, no doubt, orientalising animals were stock patterns on all temple vestments (*cf.* the Prinias goddess). Again, the argument cannot be pressed, since, on a figure in vase technique, the artist would tend to reproduce the designs he normally used on vases. This is clearly true of the first figure, and of the back and sides of the Naxian goddess. It may be said, however, that the silhouette style is not, so far as we know, a normal technique in Naxian vase painting, and for this reason the artist may be assumed to have based his animal panels on a textile original. This impression is confirmed by the general resemblance of the design to later representations of embroidered or woven garments, *e.g.*, on the François vase and on fragments of the Sophilos group. The pattern on the central stripe is almost certainly copied from textiles. The same pattern may be found on the Auxerre statuette, on Melian vases (Pfuhl, *MuZ* 109, 110), and frequently on black-figure, *e.g.*, the Burgon amphora (*CAH Plates* I, 286*a*).

3. Pl. 9. 5. Helmet crest. Ht. to top of plume 124. Thickness 5–7. Pale brown schistous clay with the usual grit. Greenish slip. Black varnish, hardly lustrous. Red wash of same character as slip, applied over it.

Both sides alike. The central stay is black. On the inner edge of the plume is a border of zigzag, the angles black and with dots in the interstices. The outer edge of this border is bounded by a line. On the plume, at spaced intervals, three lines run from one side of the stay right round over the edge of the plume to the other side. They may represent the binding of the horsehair plume.

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[35] A helmeted Artemis occurs, however, among the lead figurines at Sparta (*AO*, 274, pl. CXCVI).

Tip of tail of plume missing. The lower edge is covered with red wash.

In front of the foremost binding line the plume is covered all over with red wash. The fore tip is missing, but part of the lower edge is preserved.

The bottom edge of the stay is rough. It was apparently attached to the helmet like the handle of a vase.

Two fragments of smaller helmet, one red and one plain.

This type of plume was used on both Corinthian and Attic helmets. The raised type like ours seems to have existed at the same time as the close-up type (*cf.* Menelaos and Hector on the Euphorbos plate. The two types appear regularly together on the same vase).

The lines which I take to represent binding can be seen in the same position, usually fourfold, on black-figure pictures of helmets, *e.g.*, Pfuhl, *MuZ* 241, 298, etc. Variegated plumes, more elaborate than ours, *ibid.*, 163, 179.

The helmet may have belonged to a figure such as the preceding. It would be an outsize for either of those preserved. On the other hand, a votive helmet would in itself be a likely dedication, on the analogy of a votive shield.

4. Pl. 8. 1. Fragment of a head. One side is missing, as also the top and back of the head. Preserved ht. 45. White slip. The lower lid is rendered by a line of varnish. Trace of a compass drawn pupil, also in varnish. (YC.)

Subgeometric; cf. *Dedalica*, pl. 1. 1–2. It would be tempting to suppose that this head belonged to the figure no. 1 above, with which it is no doubt contemporary. Against this must be taken into consideration the fact that it was found a considerable distance away in a trench which, although immediately below the Acropolis, did not produce any quantity of finds which could certainly have come from the votive deposit.

5. Pl. 6. 3–4. Geometric bird. Ht. *c.* 75. Wings chipped; beak and foot missing. Varnish black to dark red. Beak reserved with three (?) stripes. Reserved eyes with spot centres. Down back of neck to tail, line of spots between pairs of lines (merged in black on one side). Reserved lines above wings. Network on breast, probably also on wings. Horizontal stripes on foot. Rest black. (North-east slope of Acropolis.)

6. Pl. 9. 6. Votive table. Top 75 × 40. Red clay with a little grit. Brick red surface. Trace of slip and varnish on legs (?). The two corners without legs are broken. The legs are crooked and get thicker towards the foot. Rather crude.

Fragment of another with two lines of varnish at edge.

Cf. *Argive Heraeum* II, p. 42, 269–70.

7. Pl. 9. 11. V shaped object. Length of thin limb 84. Fine but gritty clay, greyish in colour with rosy purple core. The surface has been pared with a knife and the diameter of the limb diminishes steadily from one end to the other. Elbow chipped. Both limbs are broken at their outer end.

I think that this object is probably an arm. Arms bent at an acute angle are characteristic of Geometric art; *cf.* bronzes: *AM* 1930, Beil. 44, 45; Lamb, *Greek and Roman Bronzes*, pl. XV; terracotta: statuettes from Crete, *JHS* 1936, 151, fig. 10; 1937, 141, fig. 12; on vases *passim.*

8. Fragments of three arms.

A. Pl. 9. 7. Right arm. Hand to elbow 105. Pink clay, shading through purple to black at core. Greenish white slip. The fingers are clenched round an object now missing. Thumb missing, and surface chipped. Lump on outer edge of wrist. Trace of varnish pattern.

B. Pl. 9. 9. Elbow to break at wrist 52. Fabric as last. Faint trace of slip and varnish. Slightly thinner than A. Slightly bent at elbow.

C. Pl. 9. 10. Wrist to elbow 69. Pinkish grey clay. Trace of varnish. Right hand with trace of springing of thumb and tip of clenched finger. Shorter and stumpier than A.

There is no reason why these should not have come from the statuettes nos. 1 and 2 above. As indicated by size and fabric, C would belong to no. 1; A and possibly B to no. 2. It is true that B is a shade smaller than A and the degree of taper certainly suggests to the eye a shorter forearm than in A. The fabric, however, is identical and such a discrepancy may well have existed on a statuette where we have already noted divergences between the decoration of one side and the other.

9. Pl. 9. 12. Fragment of recurved wing, probably from a sphinx like Winter, *Typen* 229, 9; *cf.* Jacobsthal, *Die Melische Reliefs*, 89 and pl. 66, 6. (YC.)

10. Pl. 8. 2–3. Head, from a siren plastic vase? Ht. 47. The front only is preserved. Light brown clay, grey core. Trace of red on hair.

East Greek type; cf. *Aegina*, pl. 110, no. 6; Buschor, *Altsamische Standbilder*, nos. 133, 196, 197. Last quarter of sixth century, and therefore later than anything else in this deposit.

11. Pl. 9. 8. Fragment of back hair applied to a statuette (?). Width 80. Only the bottom edge is unbroken. The fragment is curved in plan, as though following the shape of a head. The surface is striated in waves and covered with thin, black metallic varnish. The striations have fired hard and sharp. The hair curls into a volute at the bottom.

12. Pl. 9. 4. Fragment of a cock in relief. (J 2.)

Cf. *Argive Heraeum* II, 41, 258; Jacobsthal, *op. cit.*, 90. Sixth–fifth century.

B. Ivory and Bone

1. Pl. 10. 2–3. Round bone seal. Diam. *c.* 46. The reverse has a chamfered step round the outside, leaving a higher circular surface within. The latter has a central hole (? for attachment of a handle) and is partially pierced across a diameter. The outer edge of the seal is pierced with a continuous series of fine holes, *c.* 7 deep. Obverse: centaur with human forelegs to l., holding a branch in each hand. He appears to be wearing a helmet. In front, ? a bird with head curved back. Bull's-eyes in the field. Hatched border. (On the impression the nipples should be more prominent and the eye has not come out at all.) Reverse: bull's-eyes round the outer edge of the inner circle and round the outer edge of the step.

The seal belongs to the large chamfered class described *AO*, p. 230. It resembles the seal with a running warrior, *ibid.*, pl. CXLV, 1. Most of the other seals of this type found at Sparta are not illustrated in the publication, but from the description they appear to be later. Those from the Argive Heraeum, Olympia, and Delphi are of finer workmanship and certainly later.

The holes pierced on the outer edge of the Siphnos seal do not occur elsewhere (the other piercings are normal), and I can offer no explanation of their purpose. If they are merely decorative it seems odd that they should be pierced so deep.

A helmeted centaur seems something of a portent,[36] but in Late Geometric times, as Buschor has pointed out,[37] the centaur was represented in many and wonderful ways.[38] In any case it is a short step from the type with warriors on horseback which is also popular at this time. (A seal from Perachora, which must be about contemporary with ours, has a picture of this type with a bird in the field as here; *cf.* the bird on a seal from Amorgos, *BM Cat. Gems* (1926), pl. V, no. 224.) Other seals with centaurs: *AO*, pl. CLVI, 7; Samos, unpublished; steatite: Athens, Nat. Mus., from Megara (?);[39] Siphnos, F 1 below.

2. Pl. 10. 14. Part of ivory couchant animal. Length 48. The bottom and top are missing. A hole pierced fore and aft through the base, and across through the middle.

Fragment of a similar animal facing the other way.

Probably a ram, by far the commonest type at Sparta. (*AO*, pl. CXLVIII; cf. *Ephesus*, pl. XXVI, 5.)

3. Pl. 11. 7–8. Fragment of ivory spectacle fibula. Preserved length 43. Part of three circles with cable borders; two smaller circles with six-petal rosettes and linking arcs. On the latter, the background is cut away, leaving the petals and arcs in relief. Back of bronze fibula attached by bronze pins through the centres of the two rosettes.

Another fragment of one of the main discs.

This cannot be restored on the analogy of the bronze spectacle fibulae with four spirals (*AO*, pl. LXXXI), owing to the presence of the second subsidiary disc. Perhaps the most satisfactory restoration would be four main discs with a subsidiary disc at the centre and two or possibly four at the sides. For the rosettes, *cf.* Blinkenberg, *Fibules*, XV, 3 c; also on ivories from Perachora.

4. Pl. 11. 10. Bone fibula. Length 53. Main discs, eight bull's-eyes within concentric circles. Two bull's-eyes on bridge. Embryonic subsidiary discs with holes pierced at

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[36] The peak in front makes it unlikely that long hair and not a helmet is meant.

[37] *AJA* 1934, 128; *cf.* Hampe, *Sagenbilder*, 67.

[38] Centaurs with conical helmets occur in oriental art, *e.g.*, Perrot-Chipiez III, 604, fig. 412; *cf.* the curious conical headgear of the centaur in the New York bronze group (*AM* 1930, Beil. 38; Hampe, *op. cit.*, pl. 30) which Buschor identifies with Zeus and Typhon.

[39] I owe this reference to Mrs. Joan Stubbings, for whose kind assistance in this section I am most grateful.

centre in which is a trace of metal (lead or silver?). A trace of metal also in the centre of one of the main discs. At back, bronze pin (no back) with part of catch and spring. These are attached to the bone plate by bronze rivets which appear on the front off centre.

For the general type, see Blinkenberg, *Fibules*, XV, 1. The lead (?) rivets probably served to attach some additional decorative element, perhaps of amber.

5. Pl. 11. 11. Bone fibula. Same size as last. Part of one disc missing. Similar to last, but double arcs round subsidiary discs. Three bull's-eyes on bridge in line with pin. Six bull's-eyes on main discs. Two circles at centre. Bronze rivets in outer edge of inner circles on main discs. Part of bronze hinge; no back. Centres of main and subsidiary discs pierced. One of each has a lead (?) rivet.

Fragment of another of the same type. Similar rivet in subsidiary disc. (North-east slope.)

6. Pl. 11. 12. Bone fibula. Length 49. A score of bull's-eyes on main discs. Centres of all four discs sunk; only partially pierced. Iron pin and back fastened with bronze rivets at inner edge of main discs.

7. Pl. 11. 9. Bone fibula. Length 50. Side of one disc broken. Decorative ring on main discs consisting of a sort of chequer pattern. The area between this and the centre is slightly sunk. Bronze rivets at centre of one and slightly off centre of the other main disc. Iron stain on back. (North-east slope.)

Cf. *AO*, pl. CXXXII, 5.

8. Bone dividing pendants (?).

A. Pl. 11. 1. Semicircular. Width 49. Decoration of bull's-eyes on one side. Pierced across at top. The bottom edge has four holes pierced in it. The channels from each pair (*i.e.*, 1 and 2, 3 and 4) are inclined towards each other, meeting at the apex of what would appear in diagrammatic section as a shallow triangle.

B. Pl. 11. 2. Similar to last, but smaller and truncated. Width 26. Three holes on under edge. The centre hole has two channels leading from it, to left and right, which meet the channels from the side holes.

C. Pl. 11. 4. Same decoration, but shape a thin segment. Width 61. Pierced from top to bottom in seven places which are not symmetrically disposed. (Two at one end; one half-way to centre; three at centre; one at other end.) The channels are not quite vertical.

These are probably to be interpreted as dividing pendants in a necklace. Thus, A and B would be suspended by one thread and would have four threads leading downwards from them. C perhaps served to hold seven strings together on which beads were threaded. One like A was found at Sparta (*AO*, pl. CLXVIII, 2) but they do not appear to have turned up at other sites.

9. Pl. 11. 5. Double axe. Width 27. Decoration of bull's-eyes on both sides. Pierced shaft hole.

Cf. *AO*, pl. CLXIII, 6.

10. Pl. 10. 12. Spherical bead. Diam. 30. Axis pierced.

11. Pl. 10. 8. Ovoid bead. Length 24. Pierced as last.

12. Pl. 10. 9. Conical pin-head. Length 30. Pierced half-way on long axis.

Cf. *Ephesus*, pl. 33, nos. 31 and 32; *AO*, pl. CXXXVI, 3.

13. Pl. 11. 3. Ivory (?) strip, pointed at one end. Length 52. The upper side has longitudinal grooves, the central one springing from the apex of a triangle at the blunt end. The underside has flaked off.

No exact parallel elsewhere; *cf.* the pointed strips with bull's-eyes, *AO*, pl. CLXV.

14. Pl. 10. 10. Decorated piece of bone. Length 35. Grooves down the middle of each of the four sides. Bull's-eyes top and bottom. Criss-cross knife marks on one end; the other end plain. The side visible in the illustration is pierced at one end as far as the natural hollow centre of the bone.

Cf. *Lindos* 442. Blinkenberg suggests that they may have been handles.

15. Pl. 10. 15. Similar object. Length 32. Five bull's-eyes instead of six in one instance. The end which is plain in the above is here chamfered and grooved. Not pierced. (North-east slope.)

16. Pl. 11. 6. Flat ring. Diam. *c.* 14. Cut from the section of a natural bone.

17. Pl. 10. 13. Bone bead. Diam. 27. Truncated at bottom and slightly flattened on top. Pierced vertically, the hole getting larger towards the bottom. A large part has been cut out on a horizontal axis, making a sort of sliding member. The edges of it are rough and pared as though to make it fit. (It is now split into two pieces.) (J.)

Similar strange objects were found at Lindos (400 ff.) where Blinkenberg takes them to be spindle whorls. He considers the transverse shaft to be the natural hollow centre of the bone, but I do not feel convinced that this is so here because the decoration on the internal member corresponds so exactly with that on the outer part.

C. Metal

I. *Bronze fibulae*

1. Part of a large fibula with solid arc shaped like a beetle. The design consists of a central longitudinal stripe with two rows of dots. This is framed short of the ends of the arc by two cross stripes with single row of dots and a similar border on the curvilinear edges of the arc. On the back, two chevrons pointing towards the middle. The extant part of the stem consists of two knobs on one side, two knobs and a rectangular member on the other. (North-east slope.)

2. Pl. 11. 16. Smaller fragment of an exactly similar fibula.

So far as I know this type does not occur elsewhere. The heavy solid arc suggests a date in the Geometric period. The arc bears a superficial resemblance to the ' boat ' type, but the latter is very rarely solid, and the stem is quite different.

3. Pl. 11. 18. Semicircular arc with five ribs, the intermediate ribs smaller.
Cf. Blinkenberg, *Fibules*, XII, 14. Asia Minor type.

4. Similar type. Catch plate preserved.

5. Pl. 11. 17. With swollen arc; wide rib at each end of stem; face of the ribs flat.
Asia Minor type; Blinkenberg, XII, 11.

6. Pl. 11. 15. Fragment of a large fibula with a number of knobs on stem; the central one larger than the rest.
Cf. Blinkenberg, IV, 12a and the earlier type III, 10 o, both from Lindos; also *BSA* XXXV, pl. 31, no. 24.

7. Fragmentary fibula of Island type, Blinkenberg IV, 9.

8. Pl. 11. 19. Thin with plain stem. Arc slightly swollen with a knob at either side.
Probably Island type, Blinkenberg, IV, 8; *cf.* also IV, 17.

9. Small knob between tiny ribs at one side of stem.

The Cypriot types of Blinkenberg's group XIII provide the closest analogy.

10. Plain wire stem covered with a piece of bone.

Blinkenberg XI, 9a. Italian, according to Blinkenberg, but they are also very common in Greece.

II. *Various*

1. Small gold pendant of the type *Ephesus*, pl. VII, 25. (YB.)

2. Pl. 11. 13. Three bronze rings; one open with overlapping spiral ends.

For the last, cf. *BM Cat. Finger Rings*, no. 1219.

3. Small ring of bronze strip.

4. Pl. 11. 14. Bronze bangle with overlapping ends.

5. Bronze bangle tapering to ends shaped like a pointed leaf. Diam. *c.* 70.

6. Oval coils of bronze. (ear rings?)

7. Pl. 11. 20. Large bronze chain.

8. Fragment of smaller silver chain.

9. Small convex bronze disc.

10. Part of bronze hinge plate.

11. Fragments of bronze strip (36 wide) with small holes perforated at each edge. One fragment has a silver stud in the middle of the strip.

Perhaps from a votive shield. The strip may have been stitched on the rim of a leather shield.

12. Fragments of pins but no heads.

13. Fragments from a bronze bowl.

14. Fragment of a large iron fibula.

15. Fragments of iron blades.

D. FAIENCE

1. Pl. 10. 1, 11. Cat. Ht. 35. Pierced horizontally through back.

Cf. *Lindos* 1242.

2. Two bases of ovoid aryballoi. Blue glaze. Rays with trace of yellow between.

3. Pl. 10. 5. Two fragments of aryballoi. White glaze. Palm leaf; gazelle's head to l. on right; on left, a bull to r. (?). The design on the other fragment is indistinguishable.

Cf. *Lindos* 1304, 1307.

4. Fragments of thicker objects.

E. VARIOUS

1. Pl. 10. 7. Two three-corner paste beads with whorls at each corner. Pierced.

Cf. *Lindos* 151.

2. Larger bead of brown paste with projecting whorls. (Two missing.)

Beads like 1 and 2 above were also found in one of the Roman graves (No. 6) together with the three-sided Geometric steatite seal F1 (Pl. 9. 3).

3. Pl. 10. 4. Two cowry shells.

Cowries were also found at Ephesus and Nimrud.

4. Pink cone-shaped shell, pierced at wide end.

Cf. Blegen, *Prosymna*, 465, no. 4; the commonest species at this site.

5. Pl. 10. 6. Pierced knuckle bone.

6. Triangular piece of pumice stone (side 60).

7. Small amber bead.

8. Long thin piece of grey stone, broken at one end. Preserved length 50; width 21; 4 thick.

Pendant or whetstone?

9. Rim of a Geometric crater riveted with lead.

F. STONE

1. Pl. 9. 3. Three-sided seal of pale-green steatite. Length: *c.* 27. There was a pierced boss, now broken, at one end of the upper edge. On the bottom face, a horse. Sides: (*a*) centaur with human fore-legs; (*b*) ship.

Found in a Roman grave (No. 6) together with some paste beads probably of the same date. They may well have come originally from the early Greek cemetery which was in the same area, and so perhaps came to be sold as antiques by Roman grave diggers. Other instances of Mycenaean and early Greek gems being prized in Roman and modern times are given by Furtwängler, *Ant. Gem.* III, 70.

Three-sided seals are very rare, although smaller ones were of course commonly produced in Crete in Minoan times,[40] some depicting subjects of the same character as ours, *e.g.*, *P. of M.* I, 120, fig. 89: horse, ships, etc. These, however, are pierced longitudinally, and their faces have curvilinear, not rectangular contours. One or two are of larger size, e.g., *JHS* 1894, 334, fig. 53; Matz, *Frühkretische Siegel*, pl. XVII, 1: (*a*) human protome with branch, (*b*) running man, (*c*) ? horse, branch above. Furtwängler mentions a seventh-century example in the collection of the Greek Archaeological Society, *Ant. Gem.* III, 74: (*a*) warrior, (*b*) winged horse, (*c*) bull. The latter may perhaps be contemporary with ours. There are three earlier seals of this type in Berlin. (Furtwängler, *Berlin Cat.*, p. 7, nos. 62–4.)

The three subjects depicted on the Siphnos seal are all characteristic of the Late Geometric period. The style is by no means primitive, and the substantial contours of the horse and centaur suggest a date not earlier than the late eighth or early seventh century. The horse on a scarab from the Dipylon (*Ant. Gem.*, pl. IV, 38) has some of the same features as ours, *e.g.*, the stance and long body with upswept croup. This came from one of the earlier Dipylon graves, but one might perhaps expect to find an advanced technique on a scarab.

2. Pl. 9. 1. Ring of white steatite. Rectangular bezel on which is incised a figure seated on a throne holding what appears to be a sceptre. Diameter: *c.* 27. Bezel: *c.* 11 × 8.

Stone rings are uncommon before the late Roman period (*cf.* Marshall, *B.M.Cat. of Finger Rings*, p. xxxvi). The shape is also unusual. An Egyptian gold ring of the eighteenth Dynasty (Williams, *Egyptian Jewelry*, pl. VIII, 26) has a rectangular bezel, but the bezel is not separate as here but forms part of the ring. In any case this shape has few parallels in Egypt. A steatite ring in the British Museum, assigned doubtfully to the Geometric period

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[40] Evans in *JHS* 1894, 1897. It is interesting to note in passing that a pale-green steatite seal with linear script comes from Siphnos (*JHS* 1894, 287, fig. 19).

(*B.M.Cat. Finger Rings*, no. 1599), has a circular bezel on which are incised four linked spirals.[41] *Cf.* also the bronze seal from Egypt inscribed with characters in an archaic Graeco-Phoenician alphabet: Cook, *Zeus* III, 549, fig. 373. Bezel rings were of course popular in Minoan times (*e.g.*, the ring of Nestor and many others), but they bear no relation to ours.

The seated figure has every appearance of being divine, and one is tempted to suppose that we have here one of the earliest representations of Zeus. It is difficult to discover from what prototype the figure is derived, but one is reminded inevitably of the seated deities on Babylonian seals, *e.g.*, Frankfort, *Cylinder Seals*, pl. XXVII *g*, where the god holds a cup surmounted by a sun and crescent, symbols which might easily become transformed to a globe and staff.[42] This type probably persisted in Syria for many centuries; at any rate the cult of Adad and other Babylonian deities survived until Graeco-Roman times. Students of comparative religion will perhaps find it significant that the deity depicted on Babylonian seals can often be identified as Shamash, the sun god.

Whatever its true ancestry, it seems certain that our figure must be derived from the East, rather than from Minoan or Mycenaean art, where seated figures are seldom found.[43] In Geometric times they become more common, either on vases or in the form of terracotta models like those found recently in the Agora.[44]

These figures, however, appear to be human and are invariably associated with funerals, *i.e.*, they represent either mourners or the dead person himself. It is of course not out of the question that our figure may also be human. The object at the back of the throne, which is otherwise obscure, might then be interpreted as a snake, on the analogy of the Chrysapha stele. I find it hard to believe, however, that such a rare and precious object as this ring would have been made solely as a funerary offering.

The ring was found in the votive deposit on the Acropolis, another reason for supposing that the figure is divine rather than human. I should imagine that it was made at the end of the eighth century, although a later date would not be inconsistent with the context.

3. Pl. 9. 2. Mention should be made here of a third Geometric seal, not found in the excavations but acquired in Siphnos and presented to the National Museum (cf. *JHS* 1938, 232). It looks earlier than the other two,

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[41] A bronze ring from Vrokastro (Hall, *Vrokastro*, 120, fig. 70 E) also has a bezel which appears to be circular, but one cannot be certain of the shape from the drawing.

[42] Later examples of this attribute: Cook, *Zeus* I, 291.

[43] Mycenaean examples discussed by Furtwängler, *Ant. Gem.* III, 35 ff.; Minoan: *CAH Plates* I, 200 *d*; Frankfort, *loc. cit.*, 301, fig. 103 (Matz, pl. XIII, 6); *cf.* also the Cycladic 'harp players,' Bossert, *Altkreta*, 16 ff.

[44] *Hesperia*, Supp. II, 54. Another in New York illustrated by Valentin Müller in an interesting article on early Greek sculpture in *Met. Mus. Studies* V, 157 ff. T. J. Dunbabin calls my attention to another, Oxford, 1934. 320, said to be from Attica.

and may be compared with the seal illustrated by Casson in *Ant. Journ.* 1927, pl. V, 11 A.

4. Fragment of a marble plaque. Max. 130; 24 thick. Within an inscribed circle part of a large rosette formed by cutting away the background. The rosette is something like that on the Tyszkiewicz bowl (Pfuhl, *MuZ* fig. 134.) The original surface is reddish brown; where cut away, grey.

Perhaps late archaic. Purpose unknown; perhaps an architectural facing.

G. Domestic

The following objects, mostly loom weights and spindle whorls, are similar to those found on other Greek sites and call for little comment.[45] Those collected in Section I are of interest, since they come from the seventh-century house on the Acropolis and so illustrate the types in use at that period.

The conical loom weight of later times, so popular at Olynthos, seems to be virtually unknown in Siphnos.

I. *Contents of the Acropolis house*

1. Two large pierced round weights of schist, diam. *c.* 100.
2. Black stone weight or pounder. Length 110.

Terracotta

3. Two circular weights like 1 above.
4. Two wide pear-shaped, thinner than the above; one with incised X. Length 110.
5. Four similar to the above, but smaller and dumpier. Length *c.* 70.
6. Eleven pyramidal loom weights of normal type.
7. Three spindle whorls of usual biconical type.
8. One small knob-shaped whorl.

II. *Miscellaneous*

1. Same type as no. 4 above with inscribed IX. (YD.)
2. Loom weights from Hellenistic areas, similar to those from archaic areas, but better made and more regular.
3. Pl. 22. 22. Two pinched weights with stamped myrtle-crowned head. Length 65. (YB.)
4. Others smaller and more circular, in Hellenistic context. (J.)
5. Pierced marble disc. Diam. 45. (J 5.)
6. Spindle whorls, all archaic: (*a*) biconical or spheroid, (*b*) knob-shaped, concave profile, (*c*) truncated cone in dark blue stone. (Acropolis and YD.)
7. Pierced base of a cup. (YD.)
8. Fig. 6. 7. Part of a terracotta strainer. (YB.)
9. Pounders in abrasive stone. (Acropolis.)
10. Chips of obsidian. (Acropolis.)
11. Two or three fragments of flat marble bowls with wide lugs. (J.)

Same type as *Délos* XVIII, pls. 317–21. Late Hellenistic.

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[45] For a recent discussion on the subject see *Hesperia* Supp. VII, section VIII.

III. POTTERY [46]

PREHISTORIC

The scanty prehistoric finds indicate that there was a small settlement on the Acropolis in the Middle Cycladic period. Scattered sherds were found on the Acropolis and a more concentrated deposit in a trench on its eastern slope (YD). This trench also contained a quantity of grey Minyan ware which was at first thought to be archaic bucchero, since it was found mixed with eighth- and seventh-century sherds.[47] The matt-painted pottery [48] appears to be the same as the so-called early Mycenaean pottery of curvilinear style found at Phylakopi (*Excavations at Phylakopi*, 108, section 9) and should therefore be assigned to the period MC II–III.[49] The Minyan ware with which it was found is, of course, contemporary. The incised grey ware is usually considered Early Cycladic, but in Paros Rubensohn found similar pottery associated with Minyan and matt-painted pottery which can be only slightly earlier than ours.

There is no trace of any habitation on the site between the Middle Cycladic and Geometric periods. The only Mycenaean sherd found comes from a site at a considerable distance from the Kastro.

A. *Incised*

1. Pl. 12. 8. Ht. 39. Thin-walled. Gritty black surface. Probably from an askos. Hatched triangles between irregular double lines. Below, alternate hatchings. Hand made. (YD.)

2. Pl. 12. 6. Ht. 43. Base of conical pyxis. Grey clay; rough surface. On side, incised pattern of dots and grooves between lines. Probably hand made. (YD.)

Type Rubensohn, 43, fig. 43; decoration *ibid.*, 41, *e*.

The following are not certainly prehistoric:

3. From wall of pithos. Ridge with incised herring-bone. (Acropolis 6.)
4. Spreading rim of ? jug. Pendent sextuple vvv. (Acropolis 6.)
5. Flat sherd covered with wandering lines of circles. (NE.)

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[46] The following special abbreviations are used in this section:

Buschor = E. Buschor, 'Kykladisches,' *AM* 1929, 142 ff.

Eilmann = R. Eilmann, 'Frühe griechische Keramik im Samischen Heraion,' *AM* 1933, 47 ff.

Pfuhl = E. Pfuhl, 'Der archaische Friedhof am Stadtberge von Thera,' *AM* 1903, 1 ff.

Rubensohn = O. Rubensohn, 'Die prähistorischen und frühgeschichtlichen Funde auf dem Burghügel von Paros,' *AM* 1917, 1 ff.

Technau = W. Technau, 'Griechische Keramik im Samischen Heraion,' *AM* 1929, 6 ff.

[47] The summary accounts in *JHS* 1935, 163, and *AA* 1935, 237, which mention bucchero among the finds are therefore to be corrected. No archaic bucchero was in fact found.

[48] Judging by the description given by Rubensohn in *AM* 1917, pp. 54, 67, the Siphnos sherds are imports from Melos rather than of local Parian manufacture.

[49] See *BSA* XXII, 187; *BM Catalogue of Vase* I, 1 p. xxx.

B. *Plain*

6. Fig. 6. 3. Lid. (YD.)
7. Fig. 6. 1. Rim of bowl with pierced lug. (Acropolis.)
Perhaps like Rubensohn's local Minyan, *loc. cit.*, 37, fig. 34.
8. Fig. 6. 2. Rim of black bowl. (Acropolis.)
Cf. Rubensohn 20, no. 4.
9. Fig. 6. 6. Spouted bowl. On either side of spout, one small and one large knob.
Another with single knobs has bands of paint and cross-strokes on the rim, which is also grooved.

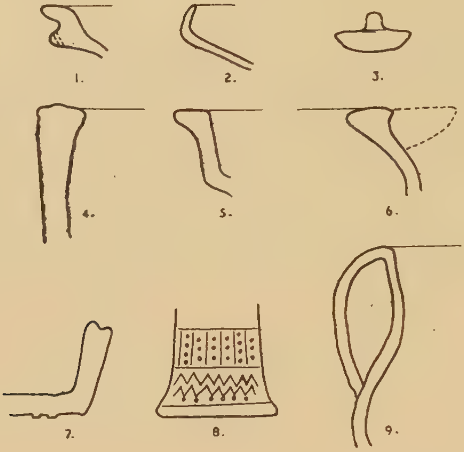

Fig. 6.—Sections of Prehistoric and Geometric Pottery.
Scale 1–3, 9, 1 : 4; 8, 1 : 6; rest, 1 : 2.

C. *Burnished red ware*

10. Fig. 6. 4. Coarse blackish clay. Burnished red surface. Rim of bowl. Hand made. (Acropolis.)

11. Fig. 6. 5. Fabric as last, but finer and wheel made. Rim of carinated bowl. Trace of group of strokes on rim in purple matt paint (? originally white). (Acropolis.)
There is another somewhat similar fragment.
? Melian imitation of Minyan; cf. *BSA* XVII, pl. 7, 201.

D. *Grey Minyan* (all from YD)

12. Fig. 7. 1. Diam. *c.* 190. Rim of carinated bowl. Grooves above the bend.
13. Fig. 7. 2. Diam. *c.* 190. Rim of carinated bowl.
14. Fig. 7. 3. Diam. *c.* 200. Rim of carinated bowl.
15. Pl. 12. 7; Fig. 7. 4. Diam. *c.* 270. Rim of carinated bowl with handle.
16. Fig. 7. 5. Pyxis with offset rim.
17. Fig. 7. 6. Pedestal base.
18. Fig. 7. 7. Foot of pedestal base.

E. *Matt painted*

19. Max. 43. Beak of jug with wide band of paint. (Acropolis house.)
20. Max. *c.* 80. Base. Wavy band and kind of bud on which is a spot of lighter brown paint. (Acropolis house.)

21. Max. 37. From a pithos (?). Vertical strokes, alternately red and black. (Acropolis.)

22. Pl. 12. 3. Ht. 27. Base of a panelled cup. (Acropolis.)

23. Max. 57. Two lines at rim. Cross-hatched band and another line below. Loop on inside of rim. (YD.)

Cf. the group *Phylakopi*, 118, section 9, 9.

24. Pl. 12. 2. Ht. 48. Two lines at rim. To right of vertical line, dotted circle. Cross-hatched band. (YD.)

Cf. *Phylakopi*, pl. 18, 25.

25. Pl. 12. 4. Max. 43. From a panelled cup with floral pattern. Inside smeared with red. (Acropolis.)

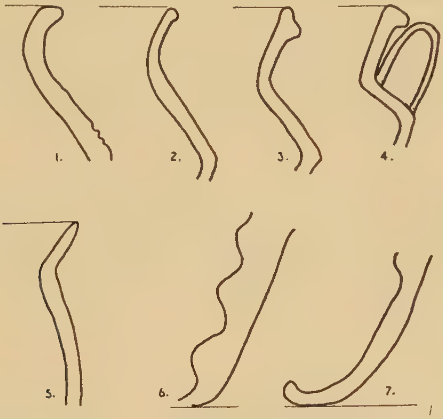

FIG. 7.—SECTIONS OF GREY MINYAN WARE.
Scale, 1 : 2.

26. Pl. 12. 1. Ht. 40. Strokes on rim. Below two lines, lozenge with solid corners and filled with three dots in vertical line; surrounded by four 'concentric' lozenges. (Acropolis.)

27. Pl. 12. 5. Base. Verticals with dots in between. Band above and below. Inside smeared with paint. (Acropolis.)

Fabric of nos. 19–27: rather chalky greenish yellow clay, sometimes with white particles; paint matt black to brown.

F. *Mycenaean*

28. Fragment of a kylix with spiral decoration. (R.)

GEOMETRIC

No pottery was found which could be identified as Protogeometric. Indeed, the bulk of it appears to be late rather than early in the Geometric series, although an earlier phase is represented by a number of sherds, mostly from skyphoi and craters, many of which came from a single trench on the Acropolis.

But we are still a long way from being able to identify with certainty different stages in the development of Cycladic Geometric, and any attempt to apply an absolute chronology is like building on sand. Even the dating of Attic Geometric, for which far more abundant evidence is available and which has recently been the subject of intensive study, still affords scope for widely differing estimates. The chronology proposed by Kahane (*AJA* 1940, 464 ff.) has gained general acceptance, but his dates often differ by a century or more from those advanced by Rodney Young in his publication of Geometric graves in the Agora (*Hesperia*, Supp. II). It would not be relevant here to enter into a detailed discussion on the subject. I shall confine myself to stating that in my opinion Young's dating appears to be based on misinterpretation of the evidence. His tendency to cram such a vast bulk of Geometric into the last quarter of the eighth century makes one wonder how he proposes to fill the gap from the end of the Protogeometric period until that time.

Hydriae

This class of hydria is difficult to date, and was probably made with little variation over a long period. At a guess the hydriae *Délos* XV 1–7 belong to the first half of the eighth century, 12–13, with lines instead of black on the body and the Parian dot zigzag on the shoulder, to the second half. Our fragments are probably early.

1. Pl. 12. 9. Neck; rim missing. Diam. *c.* 90. Quartered lozenge and wavy verticals. No lozenges in two panels to left of handle. In the next one, two crosses below lozenge. Inside, band of varnish below rim. Handle: sides black; on outer face, a squiffy cross; cross-bar of varnish at junction with neck. (Acropolis.)

Cf. *Délos* XV, group Aa, 1–7.

2. Pl. 12. 16. Max. *c.* 100. Half-way down body, possibly from an amphora. Wavy band; four lines; black with reserved line. (Acropolis 6.)

Fragments of several others, one with slip.

Cf. *Délos* XV, groups Aa, Ab.

Amphorae

Of the Parian amphorae, 1–3 belong to the latter part of the eighth century. 4 is earlier, but how much earlier it would be hard to say in the present state of our knowledge. 8 looks the earliest of all.

Only one amphora (6) can be assigned to Naxos, and that tentatively. The only parallels for its shape are Parian.

9 is an example of the Geometric stage of the Ad group. A transitional stage, corresponding to some of the fragments grouped by Rhomaios under the heading Ac, is represented by 10, to be dated probably in the last quarter of the eighth century. The Subgeometric fragments 11–13 probably belong to the first quarter of the seventh century, but are included here for the sake of continuity.

19 has an outlandish look in these surroundings. The patterns have

something in common with Theran. It may perhaps belong to the orientalising period.

1. Pl. 12. 13. Max. 62. From a thin-walled neck. Dot zigzag and spots. (YC.)
Cf. *Délos* XV, pl. 15, 1.

2. Pl. 12. 25; Fig. 8. 11. Neck. Diam. *c.* 200. Rim: upper face, group of diagonal strokes (only one preserved); edge, strokes; lower face, black. Vertical waves; two lines; tongues or more waves. Inside, band at rim. (YD.)

Cf. Pfuhl J 9. Interesting as showing transition from Pfuhl's 'besondere Gruppe' to the normal Parian (Euboic) amphora. Lip as in 'besondere Gruppe.'

3. Pl. 12. 27; Fig. 8. 12. Neck; rim broken. Diam. *c.* 100. Brown surface; dark brown lustrous varnish. Band—five lines—reversed sigmas—four lines—? band. Top of rim, group of nine strokes. Inside band at rim. (Acropolis.)
Cf. Pfuhl J 16.

4. Pl. 12. 18, 21. Shoulder of neck amphora. Ht. of two pattern friezes 31. Friezes of tongues with tangents and dotted lozenge chain. Two-line divisions. Panels with birds; five-stroke triglyphs. Fill of dotted quartered lozenge and star. (M 3.)
Another fragment: bird to left, star, cross-hatched.

From an amphora like *Délos* XV, Ab 12. No parallel for style of birds. Closest Bb 7.

5. Pl. 12. 15. Neck fragment. Width 55. Faded black varnish. Procession of birds. Dot and squiggle. (YD.)
Only instance of this ornament used for filling.

6. Pl. 12. 23, 34. Neck diameter 168. Restored height 265. Greenish weathered surface. Varnish partly off.
Neck: band below rim—five lines—cross-hatched lozenge chain—six lines—band.
Body: four lines—two panels with facing birds; fill of cross-hatched lozenges, small lozenges, and dot rosettes. Between the panels, triglyph of chevrons; two-line division. At either side, tall triglyphs of chequers which come up to the top of a zigzag frieze which surmounts the panels; on one side two-line, on the other three-line division. The white squares of the chequers have a dot in the middle. Below, lines and bands.
On handles, X and lines. Band on inside of rim and groups of six strokes on flat top. (Acropolis.)

For the type of handle cf. *Délos* XV, pl. 16. 8, pl. 15. 6 (Parian) and the later C amphorae. For the design, *ibid.*, Bc 3; bird, Bb 7. Cross-hatched lozenge chain on Naxian necks, *passim*. *Cf.* also the neck Eilmann, Beil. 44, 1 and the group connected with oinochoe 4. Dotted chequers on the crater Bc 8. Probably Naxian.

7. Pl. 14. 36. Fragment with birds and fill of lozenge and squiggle. Head of bird, four corners of lozenge and parts of squiggles (*i.e.*, where varnish is thick) have oxidised red, giving appearance of applied paint.

8. Pl. 12. 30. Fragment of large pot. Max. ht. 73. 11 thick. Schistous clay with finer surface. Brown streaky varnish, encrusted black in places. Bird between wheels with rays. Two lines—double zigzag—two bands. (Acropolis 6.)
Cf. Eilmann, fig. 28; Beil. 39, 3; *Délos* XV, Bc 8; Bb 54; Pfuhl, A 83.

9. Pl. 12. 33. Neck. Max. ht. 65. Grey clay and surface. Dark-grey varnish. Bird to l. body hatched this way and that. Zigzag column, lozenge-square, pendent hatched

triangles, swastika. Another fragment with part of opposing bird. In front of each, double lozenge with spot centre. Between the two, zigzag column. Lines on all sides of panel. (YC.)

Early Ad group; *cf.* Pfuhl. J 14.

10. Pl. 13. 1, 5. Ht. of middle friezes 31, 28. Pale-pink clay, pale-brown surface. Matt black varnish fired red on one side. Sequence preserved from shoulder to foot.

Upper frieze: winged horses; the eye is rendered in a curious way, perhaps to represent a pair of horses. Another eye is of normal type. Lozenge cross and hatched triangles between legs and pendent triangles in front of and behind horses. No zigzag. One fragment of lower part has short feet of bird (?) and part of a spiral like those of griffons in the later Ad group.

Frieze of St. Andrew's crosses with eight-stroke triglyphs.

Frieze of diagonal zigzags.

Large rays with short pendent rays in between.

Six lines between each frieze. (YC.)

Cf. the horse on *Délos* XV, Ac 9. Perhaps transitional between Ac and Ad (see on Cycladic chronology, p. 79). If so, the standard of draughtsmanship suffered a sad decline in the Ad period. It must be admitted that the style is not unlike Naxian. It is just possible, though I think unlikely, that we have here another of the multifarious Naxian imitations.

For the double rays, cf. *CVA Berlin* I, A 24, 25 (Attic). Hanging rays in Naxian, *Délos* XVII, Bc 4; *cf.* Rubensohn, fig. 99.

11. Pl. 12. 24. Max. ht. 58. Chocolate-grey surface. Neck: horse's legs; zigzag column, lozenge cross, black triangles. On shoulder, trace of smaller frieze (lozenge cross). (Q.)

Ad group.

12. Pl. 12. 26, 28, 29; Pl. 14. 10, 12. Three fragments. (*b*) 50 wide. Pink clay, brown surface. Black varnish.

(*a*) Head of griffon with spiral.
(*b*) Bird's head and horse.
(*c*) Horse's head.

Fill of lozenge cross and zigzag column. (YC.)

Ad group; *cf.* Ad 1.

13. Pl. 12. 32. Neck fragment. Max. 64. Pink clay with grey core. Worn brown surface. Horse; abbreviated zigzag column, lozenge cross. Below three lines, palmette. (D.)

Ad group; *cf.* Ad 11.

14. Pl. 12. 14. Small amphora with short neck. Ht. of frieze 26. Brown surface. Neck: zigzag between lines. Shoulder: chain of cross-hatched lozenges. Cylindrical side handles. Flat rim with groups of strokes. Inside, two lines at rim. (Acropolis.)

For the shape *cf.* amphoriskos *Délos* XV, Ab 19.

Neckless

15. Pl. 12. 31. Diam. *c.* 120. Reddish-brown varnish. Vertical panels with cross-hatched leaf and zigzag. Four-stroke triglyph. (NE.)

For the shape, *cf.* Pfuhl, fig. 53; *Délos* XV, Ab 3–5.

16. Pl. 13. 2. Diam. *c.* 150. As last. Panel with dot and squiggle. (J 1.)

17. Pl. 13. 3. Max. 55. Probably from similar amphora. Panel with wheel and diagonal zigzag. (F.)

18. Shape uncertain. Small amphora (?) with cylindrical side handles and frieze of circles exactly as on skyphoi.

19. Plate 12. 19. Max. 62. Shoulder of closed vase. Zigzag; below, twin circles or volutes filled with dots. (NE.)

? Theran.

Pithoi or Amphorae

20. Pl. 13. 6; 24. 1. Ht. 340. Diam. of mouth 180. Small-necked pithos of Parian shape. May originally have been varnished, although there is no trace left; the soil is very corrosive in this area. (Grave 15.)

21. Restored ht. 570. Lower half of pithos. Painted ring foot. Spaced bands on body. (YB.)

22. Coarse gritty pinky-yellow clay. From large amphora or pithos. Matt black varnish. Bands and octuple concentric circles. (Acropolis 6.)

Oinochoai

These are too fragmentary to afford much evidence of date and fabric. 4 and 5 are probably Late Geometric.

1. Pl. 12. 20. Ht. of frieze 25. Neck. Fourfold zigzag. Lines above; four lines below; black. (Acropolis house.)

Cf. *Délos* XV, Aa 44 ff. and Geometric *passim*.

2. Pl. 13. 25. Max. 75. Neck. Maeander; three lines; opposing teeth. (NE.) Atticising.

3. Pl. 12. 17. Neck, not certainly from an oinochoe. Ht. of frieze 25. Pink surface; matt red varnish. Birds and stars. Lines above and below. (Acropolis 6.)

Cf. *Délos* XV, Bb 26 (different style).

4. Pl. 13. 26. Max. 76. Fine buff clay; light brown surface; dark brown varnish. Thick-walled. Above shoulder, short diagonal strokes. Panels: A, B, birds to right. Dot rosettes and dot worm. Zigzag triglyph. C, wheel; three dots at corner. Three-stroke divisions. Lines on lower part of body. Flat base with leaves and triple chevron. (Acropolis.)

Foot exactly as plates, e.g., *Délos* XV, Af 1. Close in style to *ibid.*, indét. 16. Shape *ibid.*, 10. Very close to Attic. For a good summary of this group see H. R. W. Smith in *CVA Univ. California* I, *s.v.* Attic Geometric; *cf.* also *JHS* 1940, 4.

5. Pl. 12. 22. Ht. of lower frieze 18. Similar shape. Thin-walled. Pink-grey clay. Weathered grey surface. Matt black varnish. Upper part: panels: A, birds (two?) and rough dot rosettes. Triglyph of short diagonals. B, St. Andrew's cross. Three-line divisions. Three bands below. On bulge, panels with triple chevron; in top corners, rough dot rosettes. (Acropolis 6.)

See on 4. St. Andrew's cross: Pfuhl, O 2; *Délos* XV, Bb 10.

6. Ht. to top of handle 107. Small oinochoe with trefoil mouth. Grey gritty clay; trace of slip. Found inside skyphos no. 2. (Grave 15.)

Lids and Plates

Except when a reflex handle is preserved at the rim, it is not usually possible to distinguish between the two shapes. The decoration on each follows the same lines, and no doubt in practice they could be used for either purpose. Both shapes would also be commonly suspended for display.

Some are identifiable by fabric and decoration as Parian. A few more belong to the Ad group. The rest cannot be definitely assigned to any particular fabric. None of them are likely to be earlier than the middle of the eighth century.

The shields are interesting, since they have not hitherto been commonly found or identified in other fabrics.

A. *Kalathos type*

1. Pl. 13. 17. Diam. *c.* 210. Rather fine clay. Handsome appearance. Outside, on central boss, rosette, hatched triangles. Sides: leaf pattern. At rim: short diagonal strokes. Three-line division. Groups of strokes on flat rim. Inside black, save for reserved spot at centre and band near rim. (Acropolis 6.)

Cf. *Délos* XV, pl. 33, 1 ff.

2. Pl. 13. 16. Size and fabric as 1. Hatched zigzag; lines of dots and chevrons in the interstices. Below, dotted lozenge chain. Two-line system. Two reserved lines on inside. (Acropolis 6.)

Délos XV, Ab group; *cf.* Samian, Eilmann, pl. 22, 6. I have picked up sherds of similar good fabric on the Delion site in Paros.

3. Pl. 13. 13. Part of rim. Brown surface. Band of sigmas—five lines. Groups of diagonal strokes on flat rim. Inside black with a reserved line. (Acropolis 6.)

Perhaps Ac group.

Fragments of similar kalathoi from YC.

B. *With flat offset lip*

4. Pl. 13. 21. Diam. *c.* 180. Rather pink surface. Fragment with part of reflex handle. Cross-hatched triangles. Two-line system. Inside black except lip which seems to be varnished at handle only. (Acropolis.)

Cf. Samian: Eilmann, pl. 38, 3.

5. Pl. 13. 24. Similar to last. Fine clay on each surface; coarser core which is apt to flake away. Greyish core, brown surface. Part of reflex handle. Short strokes and dots—vertical waves. Inside black except lip which is reserved with groups of strokes. (Acropolis house.)

Cf. *Délos* XV, pl. 33, 8.

6. Fig. 8. 1. Diam. 140. Surface gone. Couchant animals and lozenge cross—band of ~. (Acropolis.)

Ad group.

7. Diam. *c.* 190. Wide flat lip. Yellowish buff clay. Slip and varnish completely gone. On inner side over lip, vertically pierced lug. (Acropolis.)

8. Pl. 14. 9. Diam. *c.* 200. On lip: band of ~. Inside, a plastic strap running across diameter (unpainted). (NE.)

I have included this shield here as the shape differs little from the lids of this group. *Cf.* the Samian shields: Eilmann, *AM* 1933, 118; Chiot: *BSA* XXXV, pl. 37, 23 and 30; Attic: *Hesperia* II, 609.[50] Lids imitating the Cretan bronze shields were found in the Geometric graves at Knossos.—Probably Ad group.

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[50] Several other examples are quoted by Miss Lorimer, *BSA* XLII, 76 ff.

9. Pl. 14. 6. Max. 56. Greenish slip. Shield as last. Small rim with pattern of Vs and dots. Above rim, painted studs. Higher up, part of a painted plastic stud (?). (Acropolis.)

Probably Naxian.

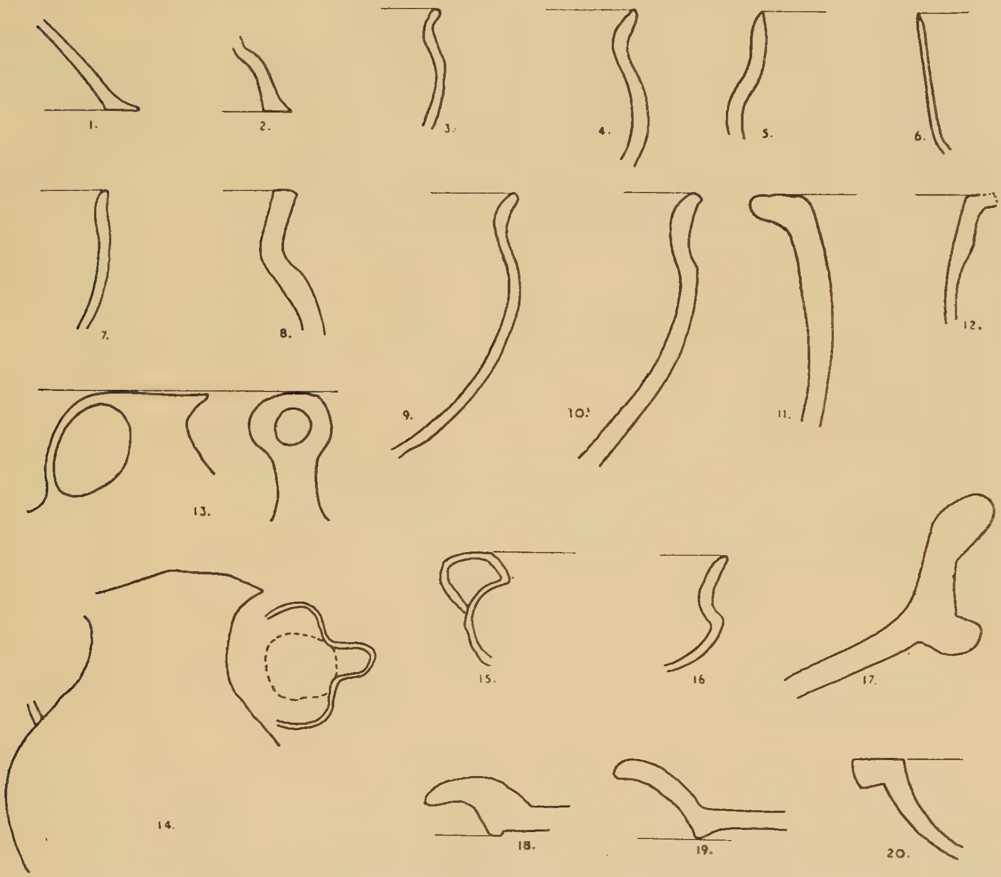

Fig. 8.—Sections of Geometric and Orientalising Pottery.
Scale 1 : 2, except 15, *c.* 1 : 4.

C. *Flat conical type without lip*

10. Pl. 13. 22. Diam. *c.* 180. Slipped. Between lines, spots linked by tangents. Inside unslipped and unvarnished. (Acropolis.)

Another from the same area with dots on either side of tangent.

Naxian.

D. *Flat type. Perhaps from plates*

11. Pl. 13. 14. Actual diameter *c.* 200. Rim missing. Round edge, solid triangles—three lines—hatched leaf (?). On other side, two bands at outer edge. (Acropolis.)

12. Pl. 13. 18. As last. Radiating sextuple lozenges or the like. Underside, two bands. (Acropolis.)

Cf. *Délos* XV, indét. 4, 5.

13. Pl. 13. 19. Max. 35. Polished grey surface. Greyish clay. Part of bird and lines. (Acropolis.)

Nearest to bird-bowl type. Closely similar, *Délos* XV, Ab 18. Perhaps Naxian.

E. *Uncertain shape*

14. Pl. 12. 12. Max. 115. Concentric circles. Vertical waves and strokes above. Inside black. Probably from a kalathos. (YC.)

Cf. *Délos* XV, pl. 33, 8.

15. Pl. 13. 23. Max. 48. Perhaps from thin-walled kantharos. Vertical solid lozenge chain with accompanying zigzags—chequers. (Acropolis 6.)

East Greek idiom, *cf.* Technau, 19, fig. 11, second row.

16. Fig. 8. 2. Diam. 125. Band of ∼. Inside unpainted. Perhaps a base. (Acropolis.)

Ad group.

17. Pl. 13. 20. Max. 59. Probably a lid. Pink clay; warm brown surface. Inside unpainted. Trace of a ray or lozenge—vertical tongues—dotted lozenge chain. Three-line divisions. (YD.)

Ac group; cf. *Délos* XV, Ac 5.

18. Pl. 13. 15. Max. 55. Probably from a lid. Round knob, zigzag. Dot and squiggle. Inside unpainted. (Acropolis.)

Parian.

19. Pl. 15. 28. Diam. 45. Disc cut out of kalathos or kantharos. Thin verticals—four rows of chevrons—band. Inside black. (Acropolis.)

Similar discs are found on many Geometric sites; cf. *Hesperia* II, 603.

F. *Knobs*

20. A few fragments of concave cylindrical type with lines on side and star on top.

Craters

The large craters with pedestal feet seem to have gone out of fashion before the end of the eighth century. The early types 1–4 which are common to most Early Geometric sites can hardly be later than the ninth century. 5–9 probably correspond to Kahane's mature stage of Attic Geometric. The two Naxian craters and the Subgeometric craters of the Ad group are more like enlarged skyphoi and are unlikely to have had a high foot. Some of the latter may belong to the first quarter of the seventh century.

1. Pl. 13. 9. Diam. *c.* 260. Rather rough surface. Matt varnish. Flat top to rim. Concentric circles. (Acropolis 6.)

2. Pl. 13. 8. Max. 50. With several carefully drawn circles. Common type. (YD.)

Cf. Tiryns I, pl. 16, 5.

3. Pl. 13. 7. Ht. 45. Network triglyph and concentric circles. (Acropolis 5.)

Cf. Tiryns I, pl. 16, 9.

Another example: Pl. 12. 11.

4. Pl. 13. 4. Diam. *c.* 260. Good fabric like other examples from this area. Varnish off except inside, where it is fine and lustrous. Concentric circles in panels; inner quadrants black. Network triglyph. Three-line divisions. Reserved line at rim. (Acropolis 6.)

5. Pl. 13. 11. Max. *c.* 120. From large crater. Thickness of wall 9. Schistous clay. Maeander—dotted-lozenge chain. Zigzag triglyph. Three-line divisions. (Acropolis.)

Perhaps from a crater like *Délos* XV, pl. 19, 1.

6. Pl. 13. 10. Max. 73. Bird of unusual style. Chequers. (YD.)

Probably Ac group.

7. Diam. *c.* 260. Rim with flat top (ht. 25). In too bad condition for illustration. At rim, tongues with tangents. Groups of strokes on flat top. Body: triglyph of two columns of chevrons. Panel with wheel. In corners of panel, quartered dotted lozenge. Around wheel, lines of squiggles, usually diagonal. Swastika. Three-line division to triglyph. Below four lines, frieze of vertical lines. (Acropolis 5.)

Cf. *Délos* XV, Ab 11. Similar triglyphs: Ab 13, Bb 3, etc., and our skyphos 14.

8. Pl. 12. 10. Max. 70. Fine pink clay. Brown surface. Metallic varnish, black to brown. Vertical chequers—herring bone—concentric circles. Three-line divisions. (J 1.)

9. Pl. 14. 29. Length 92. Below rim, dotted net. Panel of chequers. Two narrow panels of ≲ and ∼. (Acropolis house.)

Ac group.

10. Pl. 14. 11. Ht. of rim 35. At rim, tongues. Flat top black. Horse; lozenge cross and zigzag. Brown surface. (YC.)

Ad group.

11. Pl. 13. 12. Ht. 60. From similar crater. Legs of horse; lozenge cross, zigzag column, swastika, and ⅄. Lines. (Acropolis.)

Ad group.

12. Pl. 14. 14. Max. 64. Fabric as Parian. Surface worn. Horse with bird or rider on its back. Couchant deer. Close filling ornament. (YB.)

Ac group.

13. Pl. 15. 12–14. With flat-topped rim. Greyish slip. On rim, hanging lotus and lozenge frieze. Body: horse in panel; horizontal zigzag and lozenge crosses. (Acropolis.)

Ad group.

14. Pl. 14. 34. Max. 47. Grey surface. Zigzag column within line; hind legs of horse; lozenge column. (F.)

Ad group.

15. Pl. 14. 32; Fig. 8. 8. Diam. *c.* 250. Pink clay; cream slip. Varnish brown to black. Rim: interlaced zigzag. Body: eight verticals between wider uprights. Panels: left, small concentric circles; right, large circle and spot in corner. Group of strokes on top of rim. (YC.)

Naxian.

16. Pl. 15. 35. Width 50. Similar fabric and shape. Top of rim missing. Rim: spots with tangents. Panel: dotted circles with tangents; large wheel with rays—or possibly a horse with hairy mane. Part of similar object on left. (Acropolis 6.)

Fragments of others from the same area: spots or tongues with tangents. Lower parts with rows of spots and lines.

Naxian; *cf.* Buschor 153, fig. 6.

17. Crater feet.

A. From crater of Ad group with large rays. (F.)

B. Conical foot, *c.* 50 high. Slightly concave. Bottom reserved, three lines. (YD.)

C. Another slightly larger with plastic rib. (Acropolis.)

D. From large crater with pedestal foot. Preserved ht. 100. Diam. at bottom of vase 110. Black—six lines—black. Foot missing. Inside unpainted. (Acropolis 6.)

Skyphoi and Kantharoi

Only two complete skyphoi were found. The series begins probably in the ninth century with the black skyphoi with panel decoration. The rim in these early examples is usually strongly concave in profile and is not offset at an angle from the body. Sometimes there is a slight ridge at the top edge. (This may be seen in the illustration of no. 27.) Developed Geometric skyphoi show a more definite angle between rim and body, and the lip is straighter. This type leads directly to the skyphoi with offset rim which are dealt with in the orientalising section of the catalogue.

The few examples which can be identified as kantharoi are none of them early.

I have not found it possible to distinguish between Parian and Naxian until the Late Geometric period, when Naxian work becomes distinctive both in design and fabric.

Nos. 35–9 are not recognisably Cycladic. They may perhaps be East Greek.

1. Black save for reserved band at rim. Possibly from skyphoi with panel decoration. (Acropolis.)

2. Ht. 94. Diam. 112. Rim of early type. Trace of red varnish. Originally varnished all over. Found wedged in the neck of amphora no. 20. (Grave 15.)

3. Pl. 14. 22. Ht. 72. Diam. 115. Gritty black clay. Burnt and without trace of varnish. (Acropolis 6.)

4. Fig. 8. 9. Fragment from a skyphos. Black all over. Rather thin varnish. Low down, a diagonal streak of bright red. (Acropolis 6.)

5. Fig. 8. 3. Diam. *c.* 90. From a cup or skyphos. Good lustrous varnish, partly red. Reserved line at rim, inside and out. (Acropolis 6.)

6. Pl. 14. 2. Ht. 47. Zigzag at rim between lines in thin brown varnish. Rest black. (Acropolis 6.)

7. Pl. 14. 27; Fig. 8. 10. Large size. Diam. *c.* 210. Smooth surface. Varnish light red. Top corner burnt. Two lines at rim. Six stroke triglyph. Carefully drawn fourfold circles. Broad band and two narrower ones. (Acropolis 6.)

Cf. Eilmann, Beil. 23, 11.

8. Pl. 14. 26. Ht. 60. Smooth brown slip. Lustrous brown varnish. Four-stroke triglyph. Circles and dot circle. Spot in corner of panel. On the right of each circle there is a blob where the varnish overlapped. Rivet hole. (Acropolis 6.)

Cf. Theran: Pfuhl, A 32, 50, etc. Spots in corners as in Parian amphorae. The thick outer circle is also a Parian characteristic.

9. Pl. 14. 15. Diam. *c.* 140. Brown surface. Thin black varnish. Between two horizontal bands, diagonal strokes. (Acropolis 5.)

The same motive in Corinthian Early Geometric: *Corinth* VII, i, no. 72. A later version, Pfuhl, K 29.

10. Pl. 14. 17. Diam. *c.* 120. Slightly more angular rim than in the foregoing. Panel: row of dots and four lines below. Two verticals at end. Careless style. (Acropolis 5.)

11. Pl. 14. 20. Diam. *c.* 140. Ridge at bottom of rim. Panel with chevrons. (Acropolis 5.)

Cf. *Délos* XV, pl. 27, 25 ff.

12. Pl. 14. 21; Fig. 8. 4. Diam. *c.* 130. As above but with wavy verticals. Line of dots below. (Acropolis 5.)

13. Pl. 14. 16. Short more angular rim. Twofold zigzag. Inside, at rim, reserved line with group of diagonal strokes. (Acropolis house.)

Common in all Geometric sites.

14. Pl. 14. 19. Diam. *c.* 200. Four-fold zigzag. Lines below. Inside of rim as last. (Acropolis 6.)

As above.

15. Pl. 14. 24. Diam. *c.* 160. Brown surface. Matt black varnish. Groups of wavy verticals between vertical strokes. The painter had started to paint another group of wavy verticals very compressed at right-hand end, some of which have been covered by vertical strokes. Black below without intervening lines. (Acropolis 6.)

Cf. necks of Theran amphorae: Pfuhl, A 24, 25, etc.; Parian: Buschor, Beil. 51, top middle.

16. Pl. 14. 8. Diam. *c.* 140. Orange surface. Varnish black to light brown. Wavy verticals. Diagonal line of strokes. Black below. (Acropolis 6.)

Cf. decoration of Parian amphorae, *e.g.*, Pfuhl, J 16, 17.

17. Pl. 14. 25. Ht. 47. Fragment of body just below rim. Chain of cross-hatched lozenges. Vertical stroke above and continuous zigzag below. (Acropolis.)

The lozenge chain occurs in nearly all Geometric styles. Another Cycladic example at Al Mina: *JHS* 1940, 3, fig. 1 *o*.

18. Pl. 14. 7. Diam. *c.* 120. Three lines on rim. Triglyph of double chevrons. Panel on right with zigzags. Three-line divisions. Inside at rim, reserved band with groups of strokes. (Acropolis 6.)

Cf. crater, *Délos* XV, pl. 44. Attic influence. Same triglyph on our crater 7.

19. Pl. 14. 4. Diam. as last. Slightly offset rim. Two bands at rim. Maeander. On left, nine vertical strokes. Reserved band inside at rim. (Acropolis 6.)

Cf. *Délos* XV, pl. 28, 36 ff.; *JHS* 1940, 3, fig. 1 *m*.

20. Pl. 14. 28. Kantharos. Diam. *c.* 180. Worn surface. Three lines on rim. Maeander and rosette. Eleven vertical lines covering rim as well. Reserved band inside at rim. (NE.)

Cf. *Délos* XV, pl. 29, 52. Rosette, *ibid.*, pl. 32, 87.

21. Pl. 14. 5. Ht. 35. Row of dots at rim. Sides embossed. Vertical lines, dots, chevrons. Inside at rim, reserved line with group of diagonal strokes. (Acropolis 5.)

Cf. *BCH* 1911, 356, fig. 9. Attic?

22. Pl. 14. 23. Diam. *c.* 140. Buff clay. Dots on rim. Hatched maeander. Two-line division. Lines on handle. Swastika. Reserved line inside at rim. (Acropolis 6.)

Perhaps Attic.

23. Pl. 14. 3.[51] Diam. *c.* 110. Kantharos. Dots on rim. Six-stroke triglyph. Dot and zigzag. (Acropolis 5.)

Type *Délos* XV, pl. 31, 74.

24. Pl. 14. 37. Max. 57. Rim missing. Wheel. Vertical strokes. (M 3.)

Cf. *Délos* XV, pl. 29, 59.

25. Pl. 14. 18. Bird and star. (Acropolis 5.)

Cf. *Délos* XV, pl. 31, 71; 32, 85. Common in Naxian.

26. Bird and dot rosette. Above, tongues with tangents. (Acropolis.)

Perhaps Naxian; cf. *Délos* XV, pl. 53, Ab 15 and pl. 32, 87.

27. Pl. 14. 30. Ht. of panel 45. Brown surface. Fine lustrous varnish. Panel with facing birds. Reserved line inside at rim. Three rivet holes. The pot has buckled slightly in drying. (Acropolis 6.)

Rim profile as no. 4. The birds are clearly ancestors of those on Parian early orientalising amphorae, *e.g.*, Pfuhl, J 1, 2; *Thera* II, fig. 404.

28. Pl. 14. 31. Ht. *c.* 55. From similar large skyphos. Part of swimming bird. Unusual lozenge ornament and solid triangle. Lines. (Acropolis 6.)

29. Pl. 15. 36; Fig. 8. 5. Diam. *c.* 140. Pink clay, greenish grey slip with pockmarks. Varnish dark brown to black. Tongue-shaped object between groups of eight verticals. Design covers body and rim. (Acropolis 6.)

Probably Naxian; cf. *Délos* XV, pl. 32, 92; 30, 66; Theran: Pfuhl, A 130; Samian: Eilmann, Beil. 20, 9.

30. Fabric as last. At rim, groups of ^. Band at bend. Verticals and diagonal on right. Inside, reserved band at rim. (Acropolis.)

Naxian; cf. *Délos* XVII, C 9, 10.

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[51] Upside down in the illustration.

31. Pl. 14. 35. Width 50. Thin brownish slip. Goat to right? Maltese cross and encased pendent vertical. (Acropolis.)

Probably Naxian. The same body profile occurs on a fragment from Ithaca (*BSA* XLIII, pl. 43, 603 *d*) which also looks Naxian, though of a later date.

32. Ht. 38. Kotyle rim. Pale brown surface. Varnish off. At rim, hind quarters of animal to left. Quartered lozenge under body. At right, column of zigzags; verticals. Lines below. Inside, reserved line at rim with group of strokes. (Acropolis.)

Probably Naxian; cf. the later Naxian kotyle *Délos* X, 41.

33. Pl. 15. 32. Max. ht. 49. From straight-sided open vase. Beige clay. Matt black varnish. Couchant animal and star. Lines; intermediate reserved band with groups of short verticals. (Acropolis.)

Cf. couchant animals *Délos* XV, Ac 2, 9.

34. Fig. 8. 6. Max. ht. 45. ' Chalice ' on conical base. Between lines, lozenge cross and zigzags. Inside black with reserved line at rim. (Acropolis.)

Ad group.

35. Pl. 15. 34; Fig. 8. 7. Ht. of frieze 18. Pink clay with grey core. Rather orange surface. Thin matt varnish mottled red; on inside, red. Nearly straight rim. Broad band at rim. Narrow frieze of pendent double axes. The one on the right seems to have been a short one. The bounding lines were drawn first and the rest blacked in. (Acropolis.)

I know of no parallel for the pendent double axes. Perhaps East Greek.

36. Pl. 15. 27. Max. 40. Straight rim like a kotyle. Orange surface. Brown to black metallic varnish. Line at rim. Double axe. On either side, one vertical and chequers. Inside at rim, reserved line with groups of strokes.

Perhaps East Greek.

37. Pl. 14. 33. Max. 36. Similar rim. More polished surface and thicker varnish than the last. Design as before, but in place of double axe, large chequer, the ' black ' squares cross-hatched. Lines below. Inside as last. (Acropolis.)

Cf. Eilmann, Beil. 23, 10. Perhaps East Greek.

38. Pl. 15. 31.[52] Max. 32. Pink clay with grey core. Brown surface. Brown varnish, black on inside. From upper part of skyphos. Hatched cross or maeander. Head of pecking bird. Obscure object above. Below, ? concentric circles. (Acropolis.)

? East Greek; cf. *Clara Rhodos* VII, fig. 233.

39. Pl. 15. 30. Width 45. Ht. of frieze 30. Very open skyphos or kalathos. Grey clay, brown surface. Three horizontal leaves and three diagonals. (NE.)

Cf. *Délos* XV, pl. 50, indét. 6b.

One-handled Cup

Pl. 16. 2. Ht. 72. Diam. 110. Varnished all over, except for reserved line at rim, inside and out, and flat underside of base. Thin metallic black varnish. (Acropolis 6.)

Miscellaneous Coarse Pottery

1. Pl. 16. 5. Diam. 135. Bowl with flat rim and strap handles. (Acropolis.)
2. Fig. 6. 8. Width above foot 65. Foot of tripod or pyxis or perhaps the foot of a figurine? Incised pattern of circles and zigzags. (YC.)
3. Fig. 6. 9. Cooking pot. (Acropolis house.)

Yellow Monochrome

A few fragments, mostly from Acropolis 6.

1. Fig. 8. 13. Aryballos. Another with taller neck; lip missing.
2. Fig. 8. 14. Trefoil oinochoe. Handle missing. Rather globular body.

Hand-made; surface pared and polished. Yellow clay like Argive or Corinthian.

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[52] On its side in the illustration.

Cf. *Délos* XVII, section 13, where, however, the clay is said to be pink in the break. No. 9 seems to be like our no. 1. *Cf.* also *Thera* II, fig. 169, and Pfuhl, section P. Our no. 2 probably had a high handle like Pfuhl, Beil. XXXVIII, 1; cf. *Corinth* VII, i, no. 301.

Seventh Century

The orientalising period is poorly represented in comparison with the Geometric and, apart from a number of Melian and Corinthian fragments, the pottery is for the most part linear in character. The accomplished products of seventh-century Parian and Naxian potters are conspicuous by their absence.

Some of the Subgeometric pottery of the Ad group included in the preceding section will, as I have already suggested, belong to the beginning of this period.

A discussion of the chronology of Cycladic orientalising pottery is contained in the Appendix (pp. 74 ff.).

Skyphoi with Offset Rim

These were found in quantities, but there are no complete or even nearly complete examples. The shape is closely allied to the plain cups described in the following section, which can perhaps be regarded as forebears of the Ionian cup. It is for this reason that I have grouped them under the orientalising period, although the earliest examples may well have been made before the end of the eighth century. (See also the appendix on Cycladic chronology.)

Types A and B are both common on Paros, and I think it probable that nearly all the vases of this group were made in that island.

Type A

Decoration of circles. Commonest type. Direct descendant of earlier larger skyphoi. Rim usually shorter than in type B. It becomes more offset. The frieze tends to become smaller and the shape squatter. Lower part of body black. Reserved band inside at rim; usually another outside half way down.

Example:

1. Pl. 15. 13. Max. ht. 48. Diam. *c.* 160. Rim only slightly offset. (YD.) Early type.

Variants:

2. Pl. 15. 15. With dot rosettes instead of circles. Rare. (Acropolis.) Cf. Theran: Pfuhl, A 134; Parian: Buschor, Beil. LI, large sherd just below centre.

3. Pl. 15. 11. Circle converted to eye. Unique. (NE.)

4. Pl. 15. 16. Large skyphoi with dots round circles. Some slipped. (Acropolis.) Late seventh or early sixth century; *cf.* Buschor, Beil. LI bottom left (earlier); hydria *Délos* XVII, pl. 35, 3. Others in Paros from Delion.

Type A occurs with type B in the rare white-on-black technique and is probably contemporary and long lived; cf. *Délos* XV, pl. 29, 57; pl. 30, 64; *Délos* XVII, pl. 37, 16 ff.; pl. 68, lin. 20; Buschor, Beil. LI. Not in Thera.

Type B

Decoration of dot and squiggle. The pattern occurs on early shapes both in the simple form and with crossing lines of dots. Rim becomes sharply offset, thinner and wider than type A and with up to five lines. (Usually two on type A.) Chevrons and horizontal zigzags occur instead of squiggles. As in type A the frieze tends to become narrower and the shape squatter. Both types also tend to become smaller and thinner-walled. Type B is almost as common as type A.

Examples:

1. Pl. 15. 1. Diam. *c.* 160. Large and thick-walled early type. Two lines at rim and crossing lines of dots. (F.)

2. Pl. 15. 2. Diam. *c.* 130. Rim incomplete. Sharply offset with at least three lines. (Acropolis.)

Examples of type B in Mykonos are nearly all kantharoi. The decoration is disposed in three straight rows as on our no. 2. Early type: Pfuhl, J 31. Imitations in Samos: Eilmann, Beil. 20, 5; 21, 1 and 11. None of these are quite like ours. They are, however, very common in Paros.

Type C

White on black. Only a few examples, all from Acropolis.

1. Circles as type A. Vertical strokes (white) on inside of rim.

2. Dot and squiggle as type B.

3. Pl. 15. 25. Fragment with fish.

Cf. the Parian fish, Pfuhl, J 12; Samian: Eilmann, Beil. 28, 8; 29, 1; *ibid.*, fig. 56.

Cf. the use of white in Naxian: *Délos* XV, Bb 10; Buschor, Beil. 54, 6; also *Délos* XVII, indét. 9.

D. *Variant designs*

Fabric indistinguishable from A and B (except 8 and 10).

1. Pl. 15. 7. Horizontal zigzag and cross-hatched lozenge. Lozenge as in example (rim incomplete). (Acropolis.) Not uncommon. Ad group.

2. Pl. 14. 1. Diam. *c.* 160. Wide lightly offset rim with four lines. Column of three double chevrons. Dotted lozenge. Below, two lines and black. (Acropolis 6.)

3. Pl. 15. 9. As 1, but with lozenge cross in place of cross-hatched lozenge. Example, diam. *c.* 140. Wide rim. (Acropolis.) Not uncommon. Ad group.

4. Pl. 15. 8. Birds and dot rosettes. (NE.) One or two examples. Cf. *Délos* XV, pl. 30, 69.

5. Birds and hatched lozenges, one or two examples. Probably early.

6. Pl. 15. 5. Birds and horizontal zigzag. Example has sharply offset rim. (Q.)

7. Pl. 14. 13. Horses and birds in Ad caricature style. (YC, YD.)

8. Pl. 15. 4. Max. 51. Chocolate surface. Black lustrous varnish. Lines on rim. Horse. (Acropolis.) Ad group; cf. *Délos* XV, Ad 12. Several unpublished examples in Paros from Delion.

9. Pl. 15. 10. Rims with ~ probably belonging to skyphoi as 3.

10. Pl. 15. 6. Ht. of rim 30. Wide rim of thin-walled skyphos. Tongues between pairs of lines. On body, zigzags. Reserved line inside at rim. (Acropolis 5.) Ad group.

Plain Cups

The following two types were found in vast quantities. No. 2 was by far the commonest type of pottery found in the archaic deposits and is certainly, I think, a local product.

1. Pl. 16. 6. Clay usually pink; much better purified than in the next. Surface pale brown. Thin varnish, usually a shade of light brown or red. Rim and interior varnished. Outside unpainted, save for one or two bands of varnish. Low flat foot. Rather coarse handle at rim, more ribbon than cylindrical. Sometimes white strokes on flat rim by handle.

Example: diam. 145. Restored ht. 55. Base restored from another fragment.

The restoration with two handles is probably incorrect, although two-handled cups of this type do occur at an earlier stage, e.g., *Thera* II, fig. 154. Ours is probably similar to the type of cup illustrated in *Histria*, 180, fig. 132, where, however, there is no decoration outside.

2. Pl. 16. 4. Short slightly offset rim. (Sometimes more offset than in example illustrated.) Handles on shoulder slightly canted. The clay is grey and hard and usually full of particles of white grit, sometimes quite large. In some cases the surface has flaked off over a lump of grit. The surface of the clay is usually light brown. The handle zone is always reserved, and there is sometimes a reserved band on the inside of the rim. On the rim and below the handle zone there is a band of thin varnish, usually black or brown with streaks of orange or red. Also on the handles and sometimes on the inside of the rim. The rest of the cup, inside and out, is smeared with a kind of smooth and shiny clay which has rather a soapy feel. It forms a very uneven surface. The colour is usually grey or black, but often brown or red with startling mottled effects. It is always very streaky. There is a low foot, the underside of which is unpainted.

Example: diam. 125. Ht. 70.

Almost certainly made in the island. I know of no parallels elsewhere. The shape is perhaps an early version of the Ionian cup, but it cannot be regarded as a direct ancestor since there is no evidence that the Ionian cup was made locally. *Cf.* the early cups *Histria*, 82, figs. 47–49.

3. Pl. 16. 3. Ionian cups of coarse fabric. Rose-coloured clay (not unlike Cycladic) sometimes with grey core. Surface pale pink or brown. The clay is well purified, and the technique of the potter good. Varnish fairly carefully applied; usually mottled effects of black and red; rather matt. The handle zone is reserved and has a thin band which runs above the handles. The line of this and the top edge of the black on body are often not very straight. Reserved line on inside of rim. Varnished ring foot; underside plain. Fairly common.

Example: diam. 120. Ht. 75. Partly restored, including handles which are copied from other fragments. The restoration is, I fear, not brilliant; the right-hand profile is approximately correct.

Some of these may be of Cycladic manufacture; *cf.* the vases below decorated with polychrome bands.

4. Ionian cups of more refined type. Thinner walls, good technique and good black glaze. Clay pink to red, surface brown or pink. Rim wider and thinner. Some small cups have an extra reserved line below handles. Foot usually with concave profile and unpainted inside. Those which are painted on the underside appear to belong to a type of cup with reserved circle and fine lines at centre of bowl.

Several examples, mostly small fragments.

5. Fig. 8. 15. One-handled cup. Diam. *c.* 90. Sharply offset narrow rim. Grey impure clay like no. 2. Surface usually mottled red and black.

Probably a local product. Not very common.

6. Pl. 16. 1. One-handled cup. Diam. 115. Varnished all over save stripes on handle. (F.)

Period uncertain, but perhaps seventh century.

Plain Oinochoai

1. A few fragments of small oinochoai with trefoil mouth. Outside varnished all over.

2. Small oinochoe or aryballos in white on black technique. On shoulder, circles. Lower down, three lines. (Acropolis.)

Another fragment with part of linear design. Thin-walled. (YD.)

Same fabric as skyphoi with offset rim, type C.

Vases Decorated with Polychrome Bands

All from Acropolis.

1. Diam. *c.* 190. Same shape as bird bowls, but with rather larger handles. Matt slightly metallic varnish, flaking. Outside black. Inside, red band between white lines at rim; lower down, white dot rosettes.

2. Small bowls with almost flat foot. Shape like Plain Cup no. 1. Outside black. Inside, polychrome bands. White strokes on flat rim.

3. Pl. 15. 24. Ht. of frieze *c.* 18. Rim and base missing. Outside, between polychrome bands, late type lotuses in white. Inside black with red band.

4. Closed vase with twin cylindrical handle. Polychrome bands.

5. Fragment of an Ionian cup. Inside, polychrome band and white dot rosettes.

Probably Cycladic; cf. *Délos* X, pl. 17, 99 (ring vase) and *Délos* XVII, pl. 47, 40–41 (phialai). Cup from Paros: Buschor, fig. 4. Similar polychrome bands on late vases of *Délos* XVII group C, *e.g.*, 17.

Late seventh to early sixth century.

MELIAN

Amphorae

A. *Large*

1. Pl. 17. 8. Fragment of shoulder. Max. 50. 9 thick. Varnish black; thin lines brown. Floral. Red cross-band. (Acropolis.)

2. Pl. 15. 17. Neck fragment. Max. 57. 8 thick. Spiral pattern. Band of varnish inside at top. (YC.)

Other amphora fragments with floral, *c.* 7 thick.

B. *Small* (*or from hydriae*)

1. Pl. 15. 20. Max. 45. Lower part of frieze. Chiot-type filling ornament; rows of zigzags. Below lines, floral. (Acropolis.)

2. Pl. 15. 18. Max. 51. Outline tongues; lines. Mane of horse to left. The mane is red, the folds bounded by white lines. Where the locks are narrow they are bounded by black. On right, edge of wing (?). (YC.)

3. Pl. 19. 2. Ht. 30. From neck (?). Row of dots between lines. Head of swan. Eye red within white circle. The neck appears to have been sketched in outline and then filled in. Inside, band of varnish low down. (J 4.)

4. Pl. 19. 4. Max. 61. From body. Clay greyish pink. Dirty-brown varnish. Part of bull to right. Maeander cross in field. Red genitals. Further leg divided from body by reserved line. Contours of legs sketched in with faint incised lines. Ornamental incision. (J 5.)

5. With two friezes. Ht. of lower frieze 70. Surface very badly worn. Varnish and slip have mostly flaked off. Varnish oxidised bright red in places. Neck: network triglyphs with panels in between; subject unidentifiable. Shoulder: row of dots—tongues. Upper frieze: row of birds to left. Wing feathers divided by faint double incised lines. Lower frieze: spirals and five-leaf palmettes. Base missing. (M 8.)

6. Pl. 17. 4. Ht. 60. Neck. Lower part of female head with ear ring. Red band at bottom of her neck. Against the mass of hair, one large lock and a narrow wavy line down the middle in white. Below lines, row of dots. (Q.)

I have attempted to arrange these six vases in chronological order. They extend roughly over the second half of the seventh century.

Wall Plates

Pl. 17. 9. Diam. *c.* 270. False spirals linked by palmettes of one, three, and four petals. Red on odd petals. Careless style. Towards centre beyond two lines, tongues alternately red and black. At rim, band and short strokes. Reflex handle painted outside. Inside; at rim, broad strokes; three broad bands spaced. Varnish red on one side and mottled elsewhere. (YD.)

Others with spirals linked by network. (YB, Acropolis.)

Cf. *Délos* X, pl. 2, 16. Second or third quarter.

Plate

Pl. 17. 7; Fig. 8. 18. At rim, tongues, four black, one red (direct on slip). Foot of a feline with incision. East Greek filling ornament. Something like a ray. Underside unpainted and unslipped. (Acropolis.)

Perhaps Naxian; *cf.* the plate *Délos* X, Rhod.-Ion. 72. Another fragmentary in Mykonos: winged Artemis and birds. Third quarter.

Skyphos

Pl. 17. 1–3. Ht. of principal fragment 48. Trace of offset rim. Clay redder and slip thicker than usual. Varnish matt red to brownish black. Panther to right with raised fore paw. Network triglyph with red cross bar. Red for top of head, neck, and chest of panther. White lines for whiskers, nose, round eyes, and on leg.

Fragment with lower paw and part of another in opposing panel. Lower band of ⌐ between lines. Black below.

Another fragment with upper part of animal; white markings. Quartered square with dots. (Acropolis.)

Similar panthers occur on late vases in Mykonos. Last quarter.

Cup

1. Pl. 17. 5. Shape like Corinthian cup. Trace of offset rim. Ht. of frieze 30. Divided standing spiral with blob on top. Lines and black below. (Acropolis.)

2. Pl. 17. 6. Wide offset rim (width 28). Underside tongues and darts. Inside varnished save reserved line at rim. (YD.)

BIRD BOWLS

Type 1

Birds and hatched lozenges. Several fragments.

1. Pl. 15. 19. Rim frieze 21. Bird with cross-hatched body. Trace of lozenge on right. (YC.)
2. Pl. 15. 23. Rim frieze 29. Cross-hatched lozenge. (Acropolis.)
3. Pl. 15. 26. Max. 50. Part of lozenge. Back of bird. Black below. (Acropolis.)

Common at Delos. No exact parallel at Vroulia; cf. *Vroulia* fig. 44, and Antissa, *BSA* XXXII, pl. 23, 26 (more elaborate).

Type 2

Plain rim. Groups of three lines on body. Many fragments.

Pl. 19. 1. Diam. 115. Handles black. Black round foot which is missing. Inside, low down, reserved band. (YD.)

Cf. *Vroulia*, pl. 25, 2 (with polychrome band inside); *Délos* XV, Rhod. 36; *Histria* 63, III 1.

Type 3

Larger. Birds as before. Voided rays. Polychrome decoration inside. One example.

Pl. 15. 22. Rim frieze 39. Pendent cross-hatched triangle. Bird's tail (surface chipped at this point). Voided ray. Inside: at rim, red band between white lines. Lower down, white dot rosettes and another polychrome band with groups of three or four vertical strokes in white on the red band. (Votive deposit.)

Probably the same type as *Délos* XVII, Rhod.-Ion. 40, though here no birds have been preserved.

Type 4

Dot rosettes at rim. Two or three examples.

Pl. 15. 21. Rim frieze 23. Red line on white band on inside of rim. (Votive deposit.)

Cf. *JHS* 1924, 187, fig. 10; *Thera* II, fig. 222. Not at Delos. No exact parallel from Vroulia or Histria.

In all these types the clay is pink, usually with a tendency to grey. Surface light brown with dark-brown varnish or yellower with orange varnish.

CHIOT

A few small fragments of chalices in very bad condition, mostly from Acropolis and YD. One with saw decoration on body; another with row of dots at rim. One foot.

Corinthian

A. *Protocorinthian*

1. Pl. 18. 8. Max. 49. Shoulder of conical oinochoe. Ray—three rows of dots—stripes. (Acropolis.)

First half of seventh century.

2. Shoulder of aryballos. Estimated height 60. Varnish very faded. On shoulder, hare or dog to left. Lines below with a space about half way down. (Acropolis house.)

Cf. Johansen, *VS*, pl. 15, 5; *Délos* XVII, X 13, 19; *Vroulia*, pl. 42. 20, 14. Probably first quarter.

3. Pl. 18. 2. From large aryballos. Estimated ht. 120. Preserved ht. 73. Frieze 24. Between triple rows of dots, bull to right—lion to left. Below, dot rosettes and rays. Three-line divisions. (Votive deposit.)

No parallels for size except in Transitional. Probably not earlier than the middle of the century.

4. Pl. 17. 10. Trefoil oinochoe with single frieze. Frieze 25. Lower black band 50. The neck is missing, but otherwise there is a sequence preserved down to the rays. Base missing. Very fine buff clay. Varnish a sort of reddish purple and lustrous. The red is as usual reddish mauve. A third colour, probably white, has left a matt black surface.

Mouth: in side fold at rim, dot rosette in encrusted white. Trace of another below it at edge of break.

Shoulder: tongues, black—red—black—white. Scale pattern gradually getting larger from the top downwards. Scales alternately red and black, the inner part of the black scales being white. The red scales are always bounded by two incised arcs. The lower black-and-white scales have two arcs each. Farther up, the white scales have four arcs which completely cover the black surface. The top row has three arcs also covering the black. Between each of the lowest scales, a white vertical stroke.

Frieze: three stags to left—goat and panther to left—fragment with advanced hind leg of another goat or stag. The bodies of the animals have lightly incised contours, excluding neck and legs.

Broad band of black covered with red and white lines as follows: two red—two white—two spaced red—two white—one red. Rays. (Votive deposit.)

Cf. the oinochoe and olpe in BM (Payne, *NC*, Cat. nos. 32, 48), both with single frieze and no red on animals. 48, like ours, has no filling ornament. Note the unusual contour for the belly stripe on the middle stag. Late Protocorinthian.

5. Pl. 18. 10. Kotyle. Diam. 137. Ht. 112. Red varnish which has worn off in places leaving a pink surface with red outline. Stripes and rays. At rim, panel of short vertical squiggles between vertical lines. Band on handles. On inside of rim, reserved band with a line. Base flat on underside. (Votive deposit.)

Fragments of several others.

First half of seventh century, probably first quarter.

6. Pl. 18. 11. Kotyle. Diam. 47. Ht. 31. Two running dogs. Vertical strokes at rim. Two bands at foot. Vertical stroke between dogs. (Votive deposit.)

Late seventh or sixth century.

7. Pl. 18. 12. Kotyle. Diam. 47. Ht. 28. Bands. Vertical strokes at rim. Very like last. (Votive deposit.)

Like miniature kotylai from Thera: Johansen, *VS*, 79, fig. 50. Date as last.

Various fragments of black and black polychrome kotylai; Late Protocorinthian to Early Corinthian.

B. *Corinthian*

Kotylai

1. Pl. 18. 6. Estimated diam. *c.* 90. Yellow surface. Varnish dark brown to red. Band at rim. Cursive vertical zigzags. Three bands separated by groups of three lines. The middle band is entirely covered with red; the other two partially. Fairly close rays. (Votive deposit.)

Late seventh or early sixth century.

2. Pl. 18. 5. Frieze 40. Whitish yellow surface. Goat to right—feline to left (only backs preserved). Red on hind quarters. Very poor style. Short vertical waves at rim. One line above, three below frieze. (Acropolis.)

Late seventh or early sixth century.

3. Pl. 18. 1. Frieze 45. Brown surface. Vertical waves at rim. Frieze between two bands: back of feline to left. Red for belly stripe, hind quarters, and on petals of large rosette. Very poor style. (Votive deposit.)

Middle Corinthian.

4. Pl. 18. 3. Frieze 29. Brown clay and varnish. Rim as before. Goat to right and back of another. Red on neck and hind quarters. Fairly close rays. Late style. (Votive deposit.)

Late Middle Corinthian.

5. Lower part only. Base diam. 39. Brown clay, dark brown varnish. Shapeless animals and dots. No incision. Red on black band. ‘ Shading ’ rays. (Votive deposit.)

Late Corinthian.

Fragments of many small kotylai like the above with little or no incision. They give the impression of having come from one workshop.

Other Shapes

6. Pl. 19. 3. Convex pyxis. Max. 53. Pink clay, yellow surface. Warrior with red shield. Incised rosettes. (YB.)

There is no need to doubt the fabric, since Corinthian clay occasionally shows pink at the break. Middle Corinthian.

7. Pl. 18. 4. Cup. Max. 67. Brown clay, dark-brown varnish. Bird. Careful and individual style. Very short wing feathers. Red on covert and alternate feathers. Bands and lines. Inside: white line on red band. Below, three red lines. Trace of another at top. (Votive deposit.)

Late Corinthian.

Part of another from the same deposit in careful but orthodox style. (Type *NC* nos. 1342 ff.)

8. Pl. 18. 7. Cup, probably without offset rim, decorated inside and out. Max. 75. Greenish clay. Varnish off. Outside: frieze of small animals: goat to right—boar to left—bull to right. Very careful style; no incision. Broad band—short rays. Column of chevrons instead of one ray. Inside: arm of padded dancer, who covered the whole ground. Incised rosettes including double centred variety. (Votive deposit.)

Probably end of seventh century.

MISCELLANEOUS

1. Pl. 19. 18. Shoulder of East Greek oinochoe. Max. 140. Hard grey clay. Cream slip. The lines of the breaks are strangely curvilinear. Cable pattern with scales in the interstices. Two lines and bands. Another fragment from base: bands, two lines, voided ray and tongue (?). (Acropolis.)

2. Handle and rim of oinochoe. Ht. of handle 120. Hard pink clay. Red mottled

varnish. Double cylindrical handle and trefoil mouth with band of varnish on inside of rim. (Acropolis.)

? East Greek.

3. Fig. 8. 17. Rim with heavy mouldings from unknown shape (bowl or hydria?). Dark red varnish with soapy feel. Varnished all over except groove which is reserved with a row of ʅ. (Acropolis.)

4. Pl. 18. 9. From a crater. Width 60. Schistous clay with coarse particles. Surface cracked and varnish damaged. Swan's head to right. Dot rosettes and 'concentric' lozenges. (YC.)

Unidentified orientalising fabric.

5. Pl. 15. 29. Max. ht, 46. Kotyle rim. Brown surface. Volute and palmette frieze. Lines below with intermediate band of ┌┘. Reserved line inside at rim. (Acropolis.)

Cf. *Délos* XVII, C 7; also group D.

6. Pl. 15. 33. Small fragment of kotyle rim with outlined palmette. (Acropolis.)

Cf. palmettes of *Délos* XVII, group C.

7. Pl. 19. 17. Skyphos. Max. 31. Pink clay, brown surface. Dot-filled animal (?). The right-hand line is red. (Acropolis.)

Perhaps from a skyphos like *Délos* XVII, D 11, where red is used. Dotted animals also in Parian and Naxian, *e.g.*, Pfuhl, J 7; *Délos* XVII, Bb 1; Melian, unpublished.

8. Pl. 19. 15. Skyphos. Diam. *c.* 115. Fine pink clay; thin walled. Thick reddish varnish with soapy feel. Slightly outcurving rim. Broad band at rim. Alternate panels of propeller blades with dots and double axes. Triglyphs of wavy verticals between thin vertical lines. Lower part black. At foot, close rays. (R.)

Another similar fragment from Acropolis, with black varnish. Red line inside, and outside below frieze.

Unidentified fabric. Late seventh or early sixth century.

9. Pl. 19. 12.[53] (Shape not noted.) Grey schistous clay. Curious rosette; red and black petals divided by white lines. On right, breast of siren (?). (NE.)

Probably Melian.

10. Plate fragments, mostly from Q. Rims as Fig. 8. 19 and more upright. Clay usually grey, rarely pink, with greenish-white slip. Decoration of E. Greek type. On rim, tongues; bands on either side covered with white dots.

(*a*) Maeander hooks. Red and white dots on bands on rim.

(*b*) Radiating diamond and ray pattern.

(*c*) Pl. 19. 16. Horn of wild goat (?), cross, and roundel with dotted edge.

(*d*) Shape, Fig. 8. 20. Groove at mid point of rim with chequers on either side. Upper part: outline rectangles between bands. Inner part: some sort of radiating diamond and ray pattern.

(*e*) Centre. Part of bird (?) with filling ornament of outline double lozenge. At left-hand edge, something red with black outline.

Same type *Délos* XVII, Rhod.-Ion. 36, also with grey clay. The shapes are not unlike those of polychrome plates from the Delion in Paros. Probably Cycladic.

11. Two phialai. Cycladic clay. Inside, bands covered with large white spots. Outside unpainted. Rather rough. (Acropolis.)

12. Fig. 8. 16. Bowl with curved inset rim. Diam. *c.* 90. Greyish clay, reddish varnish. Rim black with trace of white dots. Shoulder reserved with dots. Black below and inside. (NE.)

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[53] Upside down in the illustration.

SIXTH CENTURY

Under this heading are grouped a small quantity of sherds mainly in b.f. technique and fragments from pithoi with decoration in relief. Some other pottery belonging to the first half of the sixth century has been included in the preceding section for the sake of continuity (*e.g.*, the Corinthian sherds). Even after allowance has been made for these, the quantity of pottery which can be ascribed to the sixth century, and more especially to the second half of the century, is strikingly small. Apart from the fragments which follow and a few more which are not worth publishing [54] there is practically nothing to represent what one might assume to be the most flourishing period in Siphnian history. The same discrepancy has, however, been noted at other sites, *e.g.*, the Samian Heraeum.

It will be seen that none of the black-figure fragments can be definitely identified as Attic. Kunze in his interesting article on 'Ionische Kleinmeister' (*AM* 1934) has called attention to the numerous cheap East Greek imitations of Attic (*ibid.*, 119) and suggests the possible existence of Cycladic b.f. as well, on the strength of the earlier examples published by Buschor (*AM* 1929, 148).

1. Pl. 19. 5. Max. 44. Shoulder of dinos (?). Pink clay with thick overlay of yellow in many thin layers; flaking badly on inside. Varnish dark brown to black. Surface damaged. In a panel, goat to right. Coarse incision. Trace of red on neck at shoulder. Roughly incised crosses. Varnished inside. (J 5.)

Cycladic imitation of Corinthian. Early sixth century.

2. Pl. 19. 6. Max. 42. Closed vase. Pink schistous clay, orange surface. Metallic black varnish. Part of black circle covered with red stripe and bounded by wavy incised lines. Blobby square at centre. (Acropolis.)

Unidentified fabric, probably Cycladic. Late seventh or early sixth century.

3. Pl. 19. 13. Max. 43. Closed vase. Fine pink clay, buff surface. Brownish-red varnish. Above a line, horse's hooves with contours carefully incised. Black below. (Q.)

The style is more reminiscent of Laconian III than of Attic—perhaps therefore East Greek—but it is difficult to place so small a fragment. First half sixth century.

4. Pl. 19. 14. Max. 92. From crater or dinos. Mauve-pink schistous clay, orange surface. Black varnish, mottled red in places. Winged female. White on face and neck. Red for fillet and on part of wing at bottom. Above, red and black outlined tongues. (Q.)

Clazomenian. Early sixth century.

5. Pl. 19. 10. Max. 44. From cup (?). Fine pink clay. Brownish-black varnish. Bird to right. Incised tail feathers. Row of dots before and behind. Inside black. (Q.)

I know of nothing quite like this. It can hardly be Attic. ? mid-sixth century.

6. Pl. 19. 11. Max. 45. Fine soft clay, burnt grey. Good black glaze. Female, probably a maenad, running to right. (NE.)

? Cycladic or East Greek imitation of Attic. Second half sixth century; *cf.* Kunze, *AM* 1934, Beil. 10, 5.

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[54] Some of the plain black glaze sherds may date from the second half of the sixth century, but they are in any case not numerous.

Pithoi with Decoration in Relief

With a few exceptions, these fragments come from the very mixed deposits in the residential area on the middle slopes of the Kastro hill. No. 1 comes from a context which was preponderantly Late Geometric; 5 and 14 from the north-east slope of the Acropolis where the majority of the finds ranged from late eighth to early sixth century B.C.

Generally speaking, the Siphnos fragments, as might be expected, show affinities with those found in Thera and Melos. I have no doubt that the pithoi themselves were made on the island; it is unlikely that such bulky objects should be imported when they could be made equally well from local clay. It does not follow, however, that the metal strips, from which the applied decoration was produced, were the work of Siphniot artists. They are, of course, certainly Cycladic and could hardly have come from farther afield than Paros or Naxos. One has only to look at the fragments from Tenos, which, as Courby has pointed out, bear a marked resemblance to Boeotian pithoi, to realise that the style of relief work in the seventh and sixth centuries was as closely localised as that of painted pottery in the same period. The divergences in other parts of the Greek world are equally apparent.

1. Pl. 20. 3. Ht. of band 40. Thickness of wall 20–23. Triglyph-metope design of incised noughts and crosses. (YC.)
Several other fragments from other parts of the site, some without the noughts.

Almost certainly a local product. Examples have been found in other parts of the island (Dragatsis, *Praktika* 1915, 98 f.; 1920, 155). The design is also common in Attica. (*AM* 1893, 134, fig. 30; Graef, *Akropolis-Vasen*, I, nos. 329 ff.). Formerly thought to be Geometric, but in Broneer's excavations on the north slope of the Acropolis the pottery associated with fragments of this type was invariably late sixth century. This dating is confirmed by the finds in the Agora (See *Hesperia* VII, 221). So simple a pattern may, however, have been used over a longish period, and one may suppose that these pithoi had a long life. An earlier date, at any rate the beginning of the sixth century, is therefore not out of the question.[54a]

2. Pl. 20. 7. Band 39. Wall 15. Lotus-palmette frieze. (J 2.)
First half sixth century.
3. Pl. 20. 8. Band 40. Wall 15–17. Alternating lotus and palmette. (J 5.)
Cf. *Thera* II, fig. 284. Date as last.
4. Pl. 20. 14. Preserved ht. of band 25. Wall 15–18. Palmettes linked by volutes. (A.)

[54a] J. M. Cook informs me that the Acropolis fragments seen by Brückner and Pernice (*AM* 1893, *loc. cit.*) connect the nought and cross pattern with spiral and cable bands and a scrap of a figured band. These fragments were recently rediscovered under the floor of the Acropolis Museum—hence Graef's denial of their existence. Cook has also found a fragment with this pattern (three O's in the vertical column) on the site of ancient Kythnos.

The type of S volute linking the palmettes goes back to Protocorinthian, *e.g.* Johansen, *VS*, 100, fig. 54. The palmettes look late, but Jacobsthal (in *Ornamente Gr. Vasen*) has shown how difficult it is to date palmettes out of their context, so I will only tentatively suggest that this example is late archaic.

5. Pl. 20. 15. Preserved ht. of main frieze 55. Wall 14. Grey-black clay, very flaky. Applied surface of finer clay. Triple cable. Above, zigzag between lines. Trace of another frieze at upper edge, but the pattern is not distinguishable. (NE.)

Probably seventh century.

6. Pl. 20. 11. Band 48. Wall 16–18. Double cable. (J 2.)

Another similar example, Pl. 20. 4.

7. Pl. 20. 13. Band 43. Wall 19–20. Triple cable.

Cf. *Thera* II, fig. 283. Similar cable on late Melian fragments in the collection of the British School (*BSA* XXVI, pl. XI, A–B). Neither this nor the last can be dated with accuracy.

8. Pl. 20. 16. Preserved ht. of band 41. Wall 15. On an applied band of lighter-coloured clay, cable. Below, tiny lying palmettes. Trace of another cable below. (J 1.)

A variant of the composite cable-palmette pattern common on archaic terracotta revetments, *e.g.*, Corcyra (*Korkyra* I, 104 ff.; Van Buren, *Gk. Fictile Revetments*, pl. XIX, fig. 63), Olympia, Treasury of Gela (*Olympische Forschungen* I, pl. 41; Van Buren, *ibid.*, pl. XXXIII, fig. 118). Ours may be an earlier phase. A different combination on the Clazomenian sarcophagus illustrated by Pfuhl, *MuZ*, fig. 141.

9. Pl. 20. 5. Band 15. Wall 14. Bright red clay. Running spiral with Melian type binding. (E.)

Another from M 7.

Cf. the more elaborate pattern on the Boeotian pithos Hampe, *Sagenbilder*, pl. 36, R. 3; Cycladic: *Délos* XVII, pl. 32, 30.

10. Pl. 20. 9. Preserved ht. of band 20. Wall 18. Running spiral. (J 2.)

11. Pl. 20. 10. Max. 100. Spiral in applied clay. Another frieze above, also in applied clay, the design of which is not intelligible. Three lines between friezes.

Cf. the spirals *Thera* II, figs. 281, 282.

12. Pl. 20. 6. Band 40. Wall 27. Tongues. (E.)

13. Pl. 20. 12. Band 68. Wall 20. Key pattern with quatrefoil. Fired bright red. (YBN.)

Late sixth or early fifth century; *cf.* late archaic terracotta revetments and borders of r.f. vases (*e.g.*, by the Panaitios painter); Clazomenian sarcophagi, *e.g.*, *CAH Plates* I, 292, *c*.

14. Pl. 20. 2. Frieze 45. Wall 17. Apparently not a pithos as there is a vertical edge at the upper right-hand side of the fragment. On an applied band, mules to right. Most of the surface of the left-hand and part of the thigh of the right-hand mule is chipped off. Thick filling ornament of hanging and standing spirals, wheel, cross, etc. (NE.)

At first sight this piece looks early, mainly on account of the filling ornament, which suggests a date at least as far back as the Athens Nessos amphora.

But, as on many of the Corinthian bronze reliefs, archaic features probably persisted in relief work of this sort over a long period (*cf.* the archaic filling on the bronze relief *NC* fig. 104 E, dated by Payne in the fifth century). The mules are not easy to date stylistically, but I should say that the relief was made at some time during the first half of the sixth century. A later date would be unlikely for an object found in this area, though not, of course, impossible. The gait is characteristic of East Greek work (*e.g.*, Pfuhl *MuZ*, 145, 148, 151) in contrast to the more straight-legged stance of the mainland.

It will be convenient to publish here the fragment illustrated in *JHS* 1937, 136, fig. 8, which, although not found in the excavations at Kastro, was acquired locally and presented to the collection of the British School. It is almost certainly of Cycladic, if not Siphniot workmanship.

15. Pl. 20. 1. Band 53. Wall *c.* 22. Micaceous clay. On an applied band, armed horseman, head reverted, galloping to right. He is wearing greaves. A hare running to right underneath the horse. The hare has whiskers, which may, however, be accidental. On the right, hind part of another horse. In the field, a star. The surface is damaged in places, particularly at the hind quarters of the galloping horse.

There is quite a Protocorinthian look about this piece, and, in fact, the design is not very remote from the riders on the Macmillan aryballos. The date of our fragment is, of course, very much later, probably by at least 100 years. The subject is a favourite one on architectural terracottas, notably those from Thasos.[54b]

Representations of fully armed horsemen are found in Crete at an early date (*e.g.*, the Prinias relief and pithoi from that site: *Annuario* I, 70, fig. 39; 93, fig. 47; also on Spartan ivory reliefs: *AO*, pl. XCII, 3; CIV, 1), but are not popular on the mainland until the sixth century (Middle Corinthian craters: Louvre E 629, 630; Late Corinthian: *NC*, fig. 19. Attic: *MA* XXXII, 323, fig. 134 b); and here they are not common until the second half of the sixth century. It may be remembered that cavalry was not used in battle, south of Thessaly, until the time of Hippias, although in earlier times the Attic Hippeis are supposed to have fulfilled the function of a mounted infantry bodyguard.[54c]

The type of prancing horse is derived from Phoenicia, according to George Hanfmann (*AJA* 1945, 575, n. 117). An earlier version of the subject in Zervos, *L'Art en Grèce*, fig. 135 (early Attic b.f. tripod pyxis). More sophisticated: Rumpf, *Sakonides*, pl. 16.

The star ornament appears on coins of Potidaea of *c.* 530 (Seltman, *Greek Coins*, pl. VII, 4) and continued, on coins at any rate, with little change down to the third century. (Corcyra *c.* 450–400, *ibid.*, pl. XIX, 7, 8; Carthage, third century, *ibid.*, pl. LXI, 2). It is also to be found on Pontic vases (Pfuhl *MuZ*, 155). The Protocorinthian version (Johansen, *VS* 119, fig. 78) is rather different. The type is no doubt ultimately derived from the East where it was commonly used as a symbol, *e.g.*, the star of Ishtar.

[54b] I have not had an opportunity of studying in detail Professor Picard's learned article in *Mon. Piot* 1941, which contains much relevant material.

[54c] J. M. Cook has called my attention to two Attic representations of armed horsemen, dating from the beginning of the orientalising period: Berlin 31006 (Neugebauer, *Führer*, p. 8) and Karlsruhe (Welter, *Bausteine*, pl. 1; *JdI* 1907, 99, fig. 12).

Reliefs of this sort continued to be made in the Cyclades until the middle of the fifth century, as is shown by the Melian examples, one of which is published in *AM* 1896, pl. V, 1. (There considered to be archaic. Jacobsthal, publishing another fragment from the same matrix (*Melische Reliefs*, 154, fig. 33), points out that they are contemporary with the middle group of Melian reliefs. Other examples: *CVA Baltimore* i, pl. 18 (incorrectly dated second half sixth century); *BSA* XXVI, 74, no. VI; cf. *ibid.*, no. V (pl. XI B), dated by Miss Lamb well on in the fifth century.)

ATTIC

Fifth–Fourth Century

Black Glaze

1. Pl. 21. 1. Cup-kotyle. Diam. 112. Ht. 64. Clay fine and dirty pink. Good black glaze. At centre, design of palmettes and tongues. Underside of foot red with two concentric circles and dot at centre. Small graffito: Æ (A.)

Fourth century; cf. *CVA Oxford* i, pl. 48, 44. Ours must be dated early in the century.

2. Pl. 21. 5. Wide mouthed oinochoe? Max. 62. Pink clay. Good glaze, but greenish and rather mottled. Glazed inside. On shoulder, stamped palmettes. Below, tongues; between each, a tiny circle. On body, vertical grooves corresponding with the tongues. The grooves show up inside. (A.)

Late fifth or early fourth century.

Red-Figure [55]

3. Pl. 19. 9. From a bell-crater. Max. 70. Quite good glaze, but discoloured. Head of youth. Purplish brown locks in front of ear. Relief contour for nose. Inside, reserved line part way down. (YC.)

c. 430–420.

4. Pl. 21. 4. From mouth of a crater, probably a calyx-crater. Ht. of frieze: 30. Double palmettes, diagonally disposed. Relief lines round volutes. (Sporadic.)

Late fifth century.

5. Pl. 19. 8. Max. 52. From thin-walled closed vase. Lady at her toilet. Mediocre glaze. No relief contour. Brown locks. White on object at left edge. (NE slope.)

Mid fourth century.

6. Pl. 19. 7. Max. 57. From open vase. Good black glaze inside; outside, inclined to be brown where thin. Debased volute palmette design. (YB.)

Fourth century.

MEGARIAN BOWLS

These are without exception of the matt-varnished type found at Delos and the shape of the rim (straight or incurving), where preserved, also distinguishes them from the Attic type. The decoration is for the most part identical with that found on the Delian bowls as illustrated by Courby in *Vases grecs à reliefs*. Nos. 9 and 16 are exceptions, but from the nature of the clay and varnish they are likely to be of Cycladic manufacture. I have found no exact parallel for the figure on the early bowl No. 6, but here again the fabric suggests that it was made in the islands.

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[55] A fragmentary r.f. pelike was found in Grave 12 and is noted on p. 88.

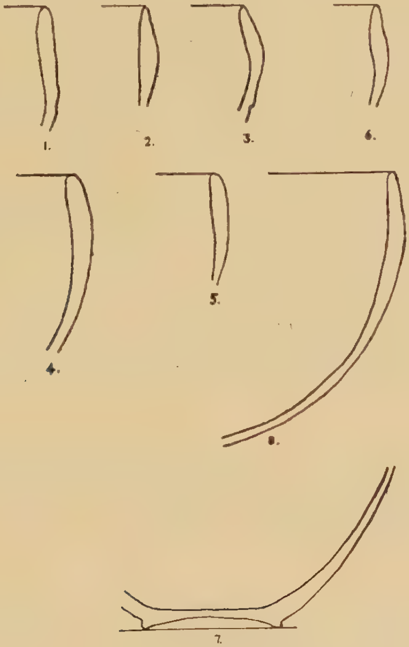

Fig. 9.—Sections of Megarian Bowls.
Scale 1 : 2.

The mould (No. 17) shows that some of these bowls were made in Siphnos. There is nothing surprising in this since it was already fairly evident that Megarian bowls were produced by every local pottery.

The fullest account of this ware since Courby's book was published is given by Homer Thompson in *Hesperia* III. Recent publications in *AJA* 1941 by Schwabacher (Kerameikos) and Baur (Stoddard Collection); Benton, *BSA* XXXIX (Ithaca).

1. Pl. 21. 15; Fig. 9. 1. Ht. 34. Rim frieze 12. Pink schistous clay. Thin, metallic black varnish, matt on inside. Cable pattern below rim. (J 2.)
Cf. Courby fig. 76, 9.

2. Pl. 21. 16. Pattern band 11. Grey-brown schistous clay. Matt grey-black surface. Overlapping threefold loops between pairs of lines. (J 2.)
Cf. Courby fig. 76, 26.

3. Pl. 21. 11. Rim frieze 13. Pink schistous clay. Matt reddish-brown surface. Disintegrated flame palmettes. On body leaf pattern. (J 2.)

Cf. Courby fig. 80, 8.

4. Pl. 21. 14; Fig. 9. 2. Rim frieze 9. Grey schistous clay. Matt grey surface. Rim pattern of standing double spirals. (J 2.)

Cf. Courby fig. 76, 12.

5. Pl. 21. 9; Fig. 9. 3. Rim frieze 9. Pink schistous clay. Reddish-brown surface, fairly lustrous. Strongly incurved rim. Rim pattern of pothooks. (ZB.)

Cf. Courby fig. 76, 8.

6. Pl. 21. 20. Ht. 45. Rim frieze 9. Grey schistous clay. Black varnish, faintly lustrous. Badly weathered. Rim pattern egg and dart. Female holding in right hand cornucopia or torch and unclear object in left hand. (J 2.)

Early type. I can find no exact parallel for the figure.

7. Pl. 21. 10; Fig. 9. 4. Rim frieze 10. Main frieze 30. Pink schistous clay. Matt varnish, black at rim, dark red below and inside. Rim pattern: star rosettes. Main frieze: running volutes with sprays and dots. (J 2.)

Cf. Courby pl. 13, 36 and 29.

8. Pl. 21. 8; Fig. 9. 5. Rim frieze to top of dots 18. Pink schistous clay. Matt red varnish, flaking badly. Below dots, key pattern. Main frieze: leaf pattern. (J 2.)

Cf. Courby fig. 76, 4, and 80, 8.

9. Pl. 21. 13. Ht. 28. Pink schistous clay. Black varnish, faintly lustrous. Flying cupid and prancing goat. (J 2.)

Cf. the Attic examples, Courby fig. 69 and Homer Thompson C 47, etc.

10. Pl. 21. 17. Diameter of rosette 36. Pink schistous clay, grey core. Matt black varnish. Bottom of bowl slightly concave. Rosette on bottom. Radiating leaves, alternately plain and palmate. (J 2.)

Cf. Courby pl. 15, d.

11. Pl. 21. 12. Max. 50. Pink clay, grey core. Matt varnish, red on raised parts of leaves, black elsewhere. Lower part of body: leaf-scale pattern. (J 2.)

Cf. Courby fig. 80, 8; Homer Thompson C 28.

12. Pl. 21. 18; Fig. 9. 6. Rim frieze 10. Grey clay. Black varnish, faintly lustrous. Rim pattern: rosettes. (J 2.)

Cf. Courby fig. 76, 3.

13. Pl. 21. 2; Fig. 9. 7. Ht. of main frieze 48. Grey schistous clay. Matt grey black varnish. Ring foot with plain base. Round foot, arrow pattern. Large leaves and rows of dots. Rim pattern unclear, perhaps rosettes. (J 2.)

Cf. Courby fig. 81, 1 and pl. 13, 32.

14. Pl. 21. 7. Diameter of inner ring of base 29. Convex base. Grey schistous clay. Black varnish, slightly lustrous. Base: whirligig surrounded by three circles and a ring of dots. Curvilinear motive on body with similar dots. In field, rosette. (J 2.)

Cf. Courby fig. 77, 5 and 80, 2.

15. Pl. 21. 3; Fig. 9. 8. Ht. of bowl *c.* 70. Friezes 25, 30. Pink schistous clay. Varnish dirty brown at rim; below and inside, dark red. Metallic lustre. Rim pattern: egg and dart. Upper frieze: running cupids. Lower frieze: volute palmettes and palm leaves. Trace of rosette at base.

Cf. Courby figs. 77, 16 and 81, 5.

16. Pl. 21. 19. Max. 52. Pink schistous clay. Metallic black varnish. Naturalistic motive of rosettes on stalks. (J 2.)

A rare and early type of decoration not hitherto found in Cycladic examples. See Courby, p. 334, for this type of motive on bowls from Athens, Boeotia and the Crimea. Further discussion by Homer Thompson, p. 455, and Schwabacher, p. 221. Our example is close to the Boeotian, but quite unlike the Attic type.

17. Pl. 21. 6. Mould. Rim frieze 10. Main frieze *c.* 40. Pink schistous clay. Rim pattern: rosettes. Main frieze: 8 pattern on palm trees. (A.)

The pattern on the main frieze is a decadent form of the winged caduceus; *cf.* Courby fig. 82, 12 and pl. 13, 35.

18. Pl. 21. 39. Fragment of similar fabric with leaf-scale pattern. At centre of base, strainer holes.

From a filter vase like Courby pl. 9 e ?

West Slope Ware

The series here represented probably covers the hundred years from 250 to 150 B.C. No. 8 may well date from the first half of the third century while the crater rim no. 1 must also be early. The straight-walled kantharoi with chequer-board pattern have inferior glaze, as can be seen from the illustration, and were probably made in the second century.

There is no striking resemblance between our examples and those from the Agora (Homer Thompson, *Hesperia* III), and I doubt whether they are Attic. I have not had an opportunity of comparing the clay and technique.

Fabric of the following (except no. 5): pink clay; thin metallic black varnish.

1. Pl. 21. 34. Crater rim. Width of frieze 37. Dolphins in applied clay and palmettes in white. Incised bounding lines. (J 2.)

? mid third century; cf. *Delphes* V, 172, fig. 721. Dolphins: Homer Thompson B 8, B 35 (here with dot rosettes).

2. Pl. 21. 36. Ht. 65. Neck of trefoil oinochoe. Two grooves below mouth. Pendent arcs in the following order (from top to bottom): white, applied clay, incised, white dots. Between the arcs, incised arrows. Three white dots at end of each barb and stalk. Frieze stops at back under handle. Neck made separately and inserted into body, the inside of which, where preserved, is varnished except for a small patch. (J 2.)

Shape Homer Thompson C 13. ? third century.

3. Pl. 21. 25. Ht. 60. Rim of straight-walled kantharos. Between deep grooves, chessboard and labyrinth. The lines are in thinned clay. Alternative chequers white. (J 2.)

Cf. *Delphes* V, 173, no. 389, fig. 719; *Aegina*, pl. 130, 2; *A Delt* 1933–35, Parart., 20 (Eleusis); Watzinger, *AM* 1901, 79, no. 26. Not common in Agora pottery except on amphorae. ? second century.

4. Pl. 21. 26, 30. Two fragments of straight-sided kantharos.[56] (*a*) width 45. (*b*) ht. of frieze 14. Wall *c.* 4 thick.

(*a*) Chessboard, the lines incised and alternate chequers white. Deep groove. Frieze as in (*b*).

(*b*) Between grooves, twin incised wavy lines. Three white dots and clay ivy leaf alternately above and below trough and crest. Three incised lines above. This is either a different frieze from that on (*a*) or else the chequers have stopped at this point. (A.)

Same date as no. 3.

5. Pl. 21. 35. Saucer. Max. 40. Varnish dark red, not metallic. Exterior, recessed

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[56] As these fragments are glazed on the inside I thought at first that they must come from a kantharos. I think it possible, however, having regard to their thickness, that they come from an amphora, since I now observe that W. Slope amphorae may be glazed inside.

foot within grooves. Interior, between grooves, lines of white dots and billets, both set obliquely. At centre, rosette with petals alternately clay and white. (A.)

Shape Homer Thompson C 12 and Watzinger, *AM* 1901, 70, 7c. A somewhat similar pattern on the amphora, Pagenstecher, *Expédition Sieglin* II, 22, fig. 30.

6. Pl. 21. 29. Ht. 36. Rim of kantharos. Herring-bone frieze in clay. Below a white line, vertical ridges. (J 2.)

For the herring-bone pattern *cf.* Watzinger, *AM* 1901, 78, 24. ? third century.

7. Pl. 21. 27. Ht. 39. Rim of kantharos. Row of pendent clay drops. White bounding line above and on left. Varnished groove. (J 2.)

Cf. Homer Thompson A 73. ? third century.

8. Pl. 21. 28. Ht. 33. Rim of kantharos. Rim more splayed and thicker wall than no. 7. Diagonal line of clay relief leaves below incised wavy line. White line above and on left. (Above E.)

Cf. the pattern Homer Thompson, B 26. ? First half third century.

9. Pl. 21. 31. Ht. 28. Rim of kantharos. Rim slightly incurved with twin grooves. Incised running spray; white dot. (J 5.)

10. Pl. 21. 33. Ht. 41. Rim of kantharos. Wavy white line with degenerate ivy leaves in clay on either side. Below, varnished groove. (J 2.)

11. Pl. 21. 32. Ht. 45. Rim of kantharos. Shape as no. 8. Twin leaves in clay. No white. (J 2.)

Cf. Homer Thompson B 25.

BASES WITH STAMPED DECORATION

The following are representative examples.

1. Pl. 22. 18. Max. 50. Good lustrous glaze with rainbow sheen. Tongues and palmettes. Band on underside of foot. (J 2.)

Late fifth or early fourth century.

2. Pl. 22. 12. Max. 65. Glaze thin but lustrous. Tongues and radiating lines of palmettes with a tongue between each. Band on underside of foot. (Sporadic.)

Fourth century.

3. Pl. 22. 16. Max. 90. Grey clay. Very thin metallic varnish. Palmette and thumbnail grooves. Underside of foot unpainted. (J 2.)

Third century.

HELLENISTIC PLAIN POTTERY

A. *Black Glaze*

Saucers

1–5 are of pink, possibly Cycladic, clay with thin slightly metallic varnish. All come from J 2 except no. 5 from A.

1. Fig. 10. 1. With incurving rim. *Cf.* Homer Thompson D 9.

2. Fig. 10. 2. With flat offset rim like a lekane.

3. Fig. 10. 3. With rim offset almost at right angles; two unvarnished grooves on body. From a fishplate like Technau, 46, fig. 35 or perhaps from a lid ?

4. Fig. 10. 4. Incurving rim with ridge.

5. Fig. 10. 5. Ht. *c.* 30. Slightly spreading rim. Late fourth or early third century?

6. Fig. 10. 6. Interior brownish black. Exterior reddish brown. Bulbous rim. Third century?

7. Fig. 10. 7. Glaze of fair quality. Nearly straight rim slightly swollen inside. Two incised lines on inside of rim. *Cf.* Technau, 44, fig. 8.

8. Pl. 21. 37; Fig. 10. 8. Straight rim with rows of thumbnail grooves outside.

Other Shapes

9. Fig. 10. 9. ? from a bowl with flat rim like a lekane. Good metallic varnish as on West Slope ware. (J 2.)

10. Fig. 10. 10. Very thin brownish glaze. Diam. *c.* 70. ? from a small pitcher, of which many examples of varying shapes are illustrated in Homer Thompson, *op. cit.* (A.)

The following bases both have thin metallic glaze:

11. Fig. 10. 12. Base of kotyle type. (J 2.)

12. Fig. 10. 13. Typical Hellenistic base. (A.)

13. Fig. 10. 11. Kantharos handle with projecting handle plate. (A.) Not so common in Siphnos as the ribbon type with rotelles.

14. Twisted handle, perhaps from a West Slope amphora. (J 2.)

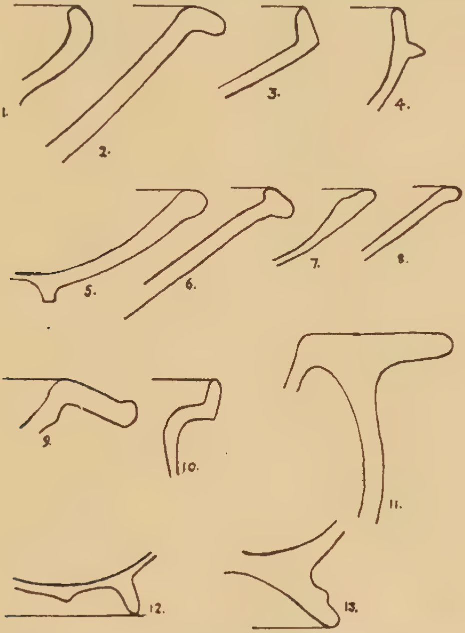

Fig. 10.—Sections of Hellenistic Pottery.
Scale 1 : 2.

B. *Blister Ware*

15. One fragment from a pyxis-shaped pot with thin walls. Grey clay, pink varnish. (J 2.)

Probably from a small pitcher. For a description of this ware see Homer Thompson, p. 470.

C. *Vases with Twisted-strap Handles*

Bowls with sharply inset wide rims and twisted strap handles. Grey clay, pink at surface. Very thin varnish; usually black and red mottled effect. Width of rim varies in different examples.

16. Pl. 21. 23; Fig. 11. 1. Diam. *c.* 190. Handle width 48. (J 2.)
Cf. Homer Thompson D 17, 18, E 52, 53. End of second century.

17. Pl. 21. 22. Bowl with mouth of S-shaped profile and twisted handle, smaller and more compressed than those of 16. Thin black varnish. (J 2.)

D. *Grey Ware*

18. Pl. 21. 38; Fig. 11. 2. Rim of a bowl. Grey clay, thin black varnish. On rim, heart-shaped stamped motive filled with dots. (J 5.)

The stamped pattern is probably a degenerate palmette. The grey ware described by Homer Thompson, p. 471, appears to be rather different. ? Late Hellenistic or Roman. *Cf.* a very similar rim with less degenerate hearts but of different fabric: Waagé, *Antioch* I, pl. XIV, 17 and pl. XV, 17.

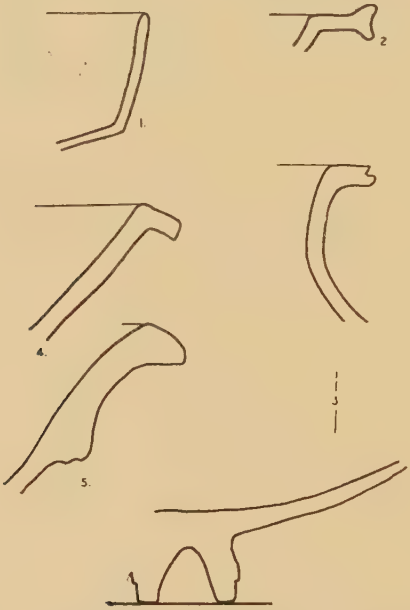

Fig. 11.—Sections of Hellenistic Pottery.
Scale 1 : 2.

E. *Jugs of Lagynos Type*

19. Fig. 11. 3. Mouth diam. 60. Narrow neck, miniature base. Deep pink clay. Very thin dirty brown varnish. On mouth, splodges of varnish covered with white. Pendent blobs on underside except at handle (which is missing). Body: black washy stripes and black dots covered by white stripe. Base: black and white bands. (A.)

I know of no parallels for the shape and decoration. The rim profile is not unlike that of West Slope amphorae and the foot also appears to be Hellenistic.

20. Pl. 21. 40. Base of similar vase. Round foot, two wavy rows of dots with wavy line in between. (J 5.)

F. *Coarse Ware*

Lekanai

21. Fig. 11. 4. Diam. *c.* 250. Clay grey at core, red on surface. On rim, strokes of dark-red varnish, thinly applied. Interior, a band below rim with trickles. Exterior, band below handles which are of cylindrical section and arc elevation. (J 2.)

22. Fig. 11. 5. Size as last. Pink clay. Very thin varnish, metallic black to brown. Blobby strokes on rim and band interior below rim. (J 2.)

23. Very coarse base, sides of pot *c.* 18 thick. On inside vertical and horizontal grooves made with a small comb.

See Homer Thompson, p. 468, for a discussion of these vases.

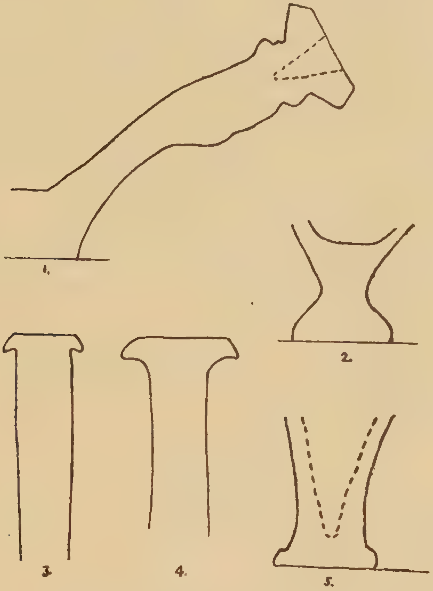

FIG. 12.—SECTIONS OF HELLENISTIC POTTERY.
Scale 1 : 2.

Mortars

24. With narrow lip and spout. Rough yellow-brown surface. (J 5.)
25. Wider rim than last. Whitish-yellow surface. On part of rim, moulded pie crust. *Cf.* Homer Thompson E 124. Late second century.

G. *Cooking pots*

26. Very coarse, probably local, clay. Offset rim and cylindrical arc handle projecting over top of rim. (J 2.)

The complete pot was probably something like Homer Thompson C 20.

27. Pl. 21. 24. Flat pan with cylindrical spout. Diam. of mouth of spout 50. Red clay. Thin dark red varnish. Handles on either side of spout which is pierced and leads into the pan which is painted inside. The pan seems to have had an incurving rim. (J 2.)

28. Fig. 12. 1. Flat pan with offset ribbed handle the end of which is pierced for a short way. Coarse grey clay. (J 2.)

Several other fragments of these frying pans were found; cf. *Thera* II, 297, fig. 486, which was found in a Byzantine context.

H. *Brazier*

29. Pl. 22. 7. Very coarse, perhaps local, reddish clay. Bearded head wearing conical cap. (Sporadic.)

Conze *JdI*, V, 1890, Type IA; *cf.* also *BCH* 1905, 387. This was the commonest type of lug among those found in Delos.

I. *Fusiform Unguentaries*

No complete specimens of these were found.

30. Fig. 12. 3. Neck. Diam. of mouth 25. Grey black clay. Rough surface. (J 2.)
31. Fig. 12. 4. Neck. Diam. of mouth 31. Clay grey to pink. Surface grey, streaked with brown. (A.)
32. Fig. 12. 5. Base. Diam. 30. Grey clay, polished surface. (D.)
33. Fig. 12. 2. Base. Diam. 26. Schistous pink clay. Poor black varnish. (A.)
Others from Grave 21. Grey clay; one with red core.

The profiles resemble those found in the earlier groups in the Agora. If this can be used as a criterion ours will hardly be later than the third century.

STAMPED AMPHORA HANDLES

All from J 2 except no. 8, from A.

Rhodian

1. Pl. 22. 3. Επὶ Ἀρχεμβρότου Θεσμοφορίου.
c. 220 B.C.
2. Pl. 22. 4. Ἐπὶ Ἀρχοκράτευς Πανάμου.
220–180 B.C.
3. Pl. 22. 5. Ἐπὶ Ἀρχ[ιδ]άμου . . . ου.
220–180 B.C.
4. Pl. 22. 21. Ἐπὶ . : μ . σα . . . . [Ἀ]ρταμιτίου. (? Τιμασαγόρας.)
End third century B.C.
5. Pl. 22. 19. Ἐπὶ Δαμοκλεῦς . . .
Before 172.
6. Pl. 22. 20. Ἀριστοκλεῦς . . .
Probably Rhodian; *cf.* Virginia Grace, *Hesperia* III, 300 fig. 5, 6 for a quasi-Rhodian stamp of Knidian fabric. The emblem on ours is more like a rose than a boukranion. *Cf.* Pridik, *Hermitage Collection*, for several examples assigned to Rhodes.
7. Pl. 22. 6. Δωρίω[ν].
Cf. Pridik, *Hermitage Collection*, 26, no. 602. The name also occurs once in Botti, *Notice des Monuments, Musée d'Alexandrie.* Late Hellenistic or Roman.

Knidian

8. Pl. 22. 1. Κνίδιον Νικαχσιβούλου.
Perhaps a misprint for Νικασιβούλου; *cf.* Virginia Grace, *loc. cit.*, no. 106 f. Late third or early second century.

9. Pl. 22. 2. [Κνιδίων] Ἐπὶ Ἕρμωνος Πολύνικος.
Cf. Pridik, *AM* 1896, 154, nos. 119–120. The ω in Κνιδίων seems fairly certain and is quite possible on the analogy of Παρίων, Θασίων. Pridik's examples have the usual Κνίδιον, however. ? second or first century.

Monogram

10. Pl. 22. 8. On neck: I<I

MOULDED WARE

The following are probably all Pergamene.

1. Pl. 22. 10. Length *c.* 50. Plaque of pink clay with a dolphin in bold relief. (J 3.)
Perhaps a handle like those illustrated by Courby, p. 455. Dolphin on brazier lug, Pagenstecher, *Expéd. Sieglin* II, 154, fig. 167.
2. Pl. 22. 15. Max. 38. Pink clay. Thick lustrous red varnish. Nude torso proceeding from a shell or palmette. Vase painted inside. (A.)

For female torsos proceeding from vegetable ornaments see Pagenstecher, *op. cit.*, pl. 50, 1, where other examples are cited. The motive is probably derived from handles in metal or clay.

3. Pl. 22. 30. Max. 70. From shoulder of closed vase, probably oinochoe. Red clay with thin varnish of a slightly darker colour. Erotic symplegma. (J 2.)
Cf. *AM* 1912, pl. 30, 4.
4. Max. 48. Slightly lustrous varnish. Base of open vase. Exterior, shell in relief acting as foot. (J 5.)
Cf. Pagenstecher, *op. cit.*, 21, fig. 29; *Priene* 396, fig. 526, 7.

TERRA SIGILLATA

It is no easy task for a field archaeologist without special knowledge to classify pottery of this type, as anyone who has read Iliffe's article in *QDAP* 1938 will be aware. Where even the experts are doubtful of their own and each other's attributions and are often guilty of curious lapses, it is inevitable that the amateur will fall into yet deeper pitfalls. I have attempted to group the following fragments according to their fabric, but in many instances, I fear, my attributions may be found incorrect. As a tribute to Iliffe's brave attempt to produce order out of chaos, I should like to have been able to adopt his grouping of Near Eastern Sigillata. I must confess, however, that I do not find this entirely satisfactory. (Why, for instance, place Samian before Pergamene when the latter is clearly earlier?) Until we have a detailed and authoritative study of the various Eastern fabrics, I consider it preferable to keep to the familiar and easily remembered, if inexact, titles, Pergamene and Samian.

A. *Italian*

Nos. 1–3 have hard clay, pale pink to buff; dark red glaze, rather like the darker kind of Samian.

1. Pl. 22. 33; Fig. 13. 1. Diameter *c.* 41. Base of cup with stamped seal impression, only the edge of which is extant. I cannot make out what the letters are, if indeed they are letters. (J 2.)

Shape as Knipowitsch, *Die Keramik römischer Zeit aus Olbia*, fig. 1, no. 2; cf. *Forschungen in Ephesos* I, 168, no. 3.

2. Pl. 22. 25; Fig. 13. 3. Rim of bowl. At rim, roulette pattern of vertical grooves and strokes. At bend, short vertical grooves. (ZC.)

Cf. Knipowitsch, *op. cit.*, fig. 1, no. 8. The same shape occurs in Samian.

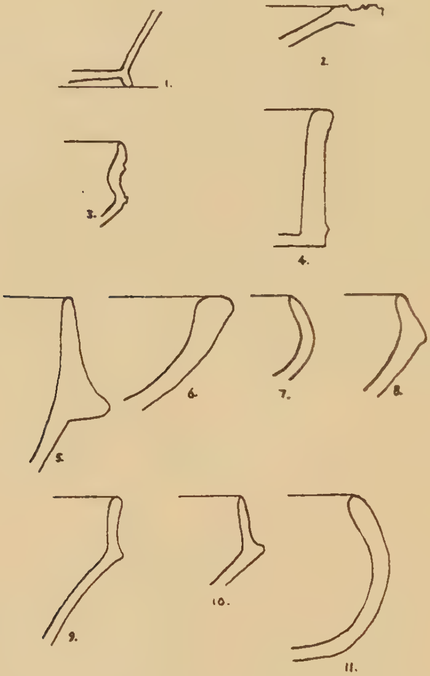

Fig. 13.—Sections of Roman Pottery.
Scale 1 : 2.

3. Pl. 22. 32. Fragment of base. Wheelmarks on underside. On upper surface, within circle, part of rectangular stamp. (Sporadic.)

? P. Auctus or P. Augustus. The stamp occurs only once as far as I can discover: *CIL* XI 6700, 121.

4. Pl. 22. 24; Fig. 13. 2. Hard clay, but red and less fine. Glaze a shade darker and less polished. Rim of bowl or plate. On upper edge of rim, coarse diagonal grooves. Lower edge broken, but there is a trace of a moulding. (A.)

I do not feel at all certain about the attribution or even the shape of this fragment.

5. Fig. 13. 4. Ht. 40. Plate with vertical sides. Soft pink clay. Varnish in bad condition, the colour of Pergamene. Exterior, at rim and base, small vertical grooves. (J 5.)

I classed this at first among the Near Eastern wares, but the shape appears to be confined to Italian; *cf.* Waagé, *Hesperia* II, no. 76; Knipowitsch, *op. cit.*, fig. 1, no. 4.

B. *Near Eastern*

I. Pergamene

1. Pl. 22. 17; Fig. 14. 1. Base of plate. Diam. of foot *c.* 150. Buff clay, warm-red varnish. Interior at centre, rosette. Three incised circles with tiny grooves. Degenerate palmettes. Roulette pattern of small grooves. (J 2.)

For the patterns *cf.* Oxé, *AM* 1927, 214, fig. 1–3. Shape, *cf.* Technau, *AM* 1929, 49, fig. 37. Ours is later and nearer in profile to Beth Shan 29–102–552 illustrated in *Antioch* I, 71, fig. 3.

2. Pl. 22. 28; Fig. 14. 2. Same fabric, rather pinker clay. On top of rim at edge: small tongues. On side of rim, egg and dart. (E.)

For this type see Waagé, *Antioch* I, 70, no. 5.

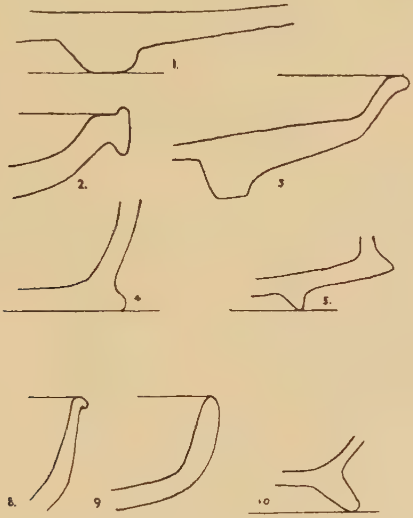

Fig. 14.—Sections of Roman Pottery.
Scale 1 : 2.

3. Fig. 14. 3. Small plate. Diam. *c.* 160. Yellow buff clay. Varnish mostly off. (A.)

Type discussed by Waagé, *Antioch* I, 71, no. 8.

4. Fig. 14. 8. Rim fragment. Red slightly mottled. (J 2.)

Cf. *JHS* 1940, 96, fig. 1, no. 2.

5. Fig. 14. 9. Buff clay. Plate rim with curved profile. (J 2.)

An early type; *cf.* Technau, *AM* 1929, 49, fig. 37, and Waagé, *Antioch* I, 71, fig. 3 (from Beth Shan).

6. Fig. 14. 10. Base of open vase. Diam. 50. Buff clay. Varnish rather blotchy. (J 1.)

Perhaps Hellenistic. Waagé, *Hesperia* II, pl. VIII, no. 62 is fairly close.

7. Pl. 22. 27. From side of curved open vase. Vertical comb stripes. (J 2.)

Judging by the fabric, this should belong here, but I know nothing like it. The comb decoration suggests a Hellenistic date.

8. Pl. 37. 9. Diam. 75. Small bowl. The bottom is conical within a ring foot. Varnish rather livid red. In very poor condition like all pottery from these graves. (Grave 24.)

The conical underside of foot is typical of Tschandarli ware, of which our bowl may well be an example. *Cf.* Waagé, *Hesperia* II, no. 97.

9. Fig. 14. 4. Clay exactly as in no. 3. Varnish bright red. Straight-sided beaker with flat base. (A.)

Cf. Oxé *AM* 1927, 215, fig. 2, nos. 21, 24. It is not clear to me from the text to what fabric Oxé assigns these. If the following example is Italian, this will be also, as their fabric is identical.

10. Fig. 14. 5. Fabric exactly as last. Bowl with vertical side and pronounced keel. (A.)

According to Knipowitsch the pointed foot is an indication of Italian origin. I am not convinced, however, that it is a sure criterion. For a somewhat similar shape in Samian, see *Priene*, 432, fig. 550, 133; cf. *Ephesos* I, 174, nos. 62, 63. The fabric of this and the foregoing is so like Pergamene that I have preferred to list them in this group, but without any strong conviction that they really belong here.

II. Samian

1. Fig. 13. 9. Rim of bowl. Pinky brown clay. Varnish a shade darker red than normal and flaking off. (Above E.)

2. Fig. 13. 10. Rim of bowl. Same fabric as above. At rim, horizontal grooves inside and out. Outside, on bend, tiny vertical grooves; below bend, horizontal grooves. (J 5.)

Cf. Waagé, *Hesperia* II, no. 101. Apparently a variant of the common type, Knipowitsch Type 4.

3. Fig. 13. 7. Rim of bowl with curved profile. Brick red varnish, matt and firm. (J 1.)

Perhaps from a bowl like Knipowitsch Type 26 or 26A.

4. Fig. 13. 6. Rim of plate. Reddish clay. Brick red varnish, flaking off. (Below A.)

Cf. Waagé, *Hesperia* II, no. 105.

5. Fig. 13. 11. Curved rim of plate. Dark red varnish. (J 1.)

Knipowitsch Type 2.

6. Fig. 13. 8. Rim of bowl. Good polished surface. Varnish the same shade of red as nos. 1 and 2. Horizontal grooves below rim, inside and out. (J 5.)

Cf. Waagé, *Hesperia* II, no. 109.

7. Pl. 30. 2; Fig. 13. 5. Bowl. Diameter 103. Height 58. Surface badly worn. (Grave 8.) Fragments of several others. Pink clay. Rather dirty dark red varnish, with a slight sheen. Wheel marks on sides.

Cf. Technau, *AM* 1929, fig. 43, 3; *JHS* 1940, 96, fig. 1, no. 10. Late type of profile.

Of the foregoing, nos. 1–5 are probably first century A.D., nos. 6–7 second century.

LATE ROMAN

The classification is based on Waagé's publication of the Agora pottery in *Hesperia* II.

Class A

A considerable quantity of fragments of the finer type of this ware came from one trench, K. The clay is hard and salmon pink, compared with which Samian looks quite brown. The surface is brick red, smooth but not polished, with occasional pock marks.

1. Fig. 15. 1. Bowls with plain rim and practically flat base, slightly recessed on under side. (K.)

Cf. Waagé, *Hesperia* II, nos. 115 f.

2. Fig. 15. 2. Rim of plate or bowl. Groove at outer edge. (J 1.)

Cf. Waagé, *loc. cit.*, no. 120.

3. Pl. 22. 29. Flat rim. Roulette pattern at middle of upper side. Groove at rim. (K.)

4. Pl. 22. 26. Similar rim. Surface polished. At middle, very shallow diagonal grooves. (K.)

Cf. the decoration of this and no. 3 with that on the shallow bowls, Waagé, nos. 129–135, and no. 5 below.

5. Pl. 22. 34; Fig. 15. 6. Clay as before. Thicker walls and rougher surface of slightly lighter colour. Bowl with roulette pattern on side. Ht. *c.* 60. Horizontal grooves at rim and base. (M 7.)

Other larger bowls from the same area with roulette pattern also on rim.

Cf. Waagé, nos. 129–135.

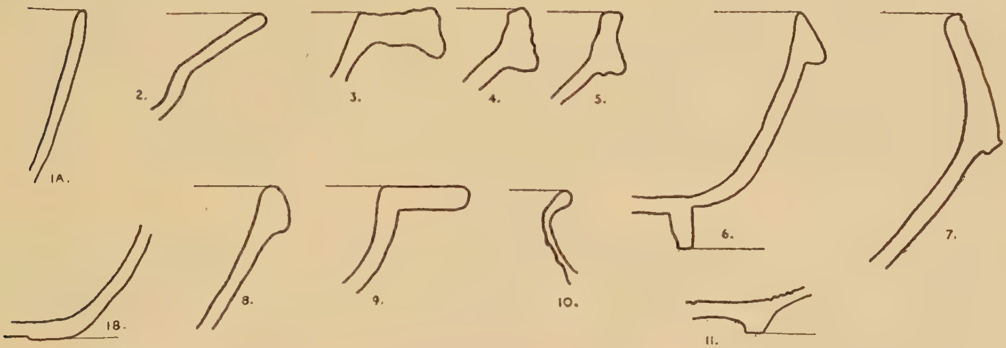

Fig. 15.—Sections of Late Roman and Early Christian Pottery.
Scale 1 : 2.

Class B

1. Fig. 15. 8. Rim of bowl. Polished surface, the colour of Samian. (R 4.)

Does not certainly belong in this group; perhaps earlier.

2. Fig. 15. 9. Rim of bowl. Rather deep red clay. Dark red surface, about the colour of Class A but rougher and with thicker walls. On rim, slight ridges. On sides, deep spaced vertical grooves which show up inside. (J 4.)

Cf. Waagé, *Hesperia* II, nos. 180–3.

3. Pl. 22. 14. Fragment of stamped base. Deep pink clay. Brick red smooth surface, brownish on under side. Round an outer circle, tongues. At centre, some sort of design with spiral volutes and cable. (J.)

Cf. volutes on Waagé, no. 149; cable, *ibid.*, no. 227. Waagé calls the first Late A, the second Late C. I should say that both, together with ours, are Class B.

4. Pl. 22. 13. Pink clay, paler than Samian. Pale pink surface, rather weathered. Similar stamped base with pattern of radiating palms with concentric circles in between. (J 4.)

The pattern is a common one; *cf.* Waagé, *Hesperia* II, 297, fig. 3, no. 195.

Class C

1. Fig. 15. 3–5. Rims of bowls. Rough surface with occasionally a purplish tinge. Roulette pattern on rims consisting of grooves filled with diagonal nicks. (R.)

Cf. Waagé, *Hesperia* II, fig. 4, nos. 208, 209.

2. Fig. 15. 11. Base of similar bowl with exactly similar roulette pattern on inside. *Cf.* Waagé, *loc cit.*, no. 234.

Miscellaneous

1. Pl. 29. 1. Feeding cup. Ht. 58. Pink clay. Handle at 40 degrees to spout. Vertical groove down handle. (Grave 6.)

First century; see pp. 86, 82.

2. Pl. 22. 35; Fig. 15. 7. Rim of large bowl. Coarse brownish pink clay. Matt red varnish. On rim, running spirals in thin white paint. (Provenance missing.)

Exactly like the bowls published by Waagé, *loc. cit.*, fig. 5, nos. 243, 244, which he believes to be of local Attic manufacture.

3. Pl. 21. 21. Cup. Diam. 90. Rough matt red surface with faint grooves. Vertical groove on handle as no. 1. (A).

Early Christian

1. Pl. 22. 23. Mug. Ht. 100. Diam. 74. Badly weathered. Buff clay with a tinge of pink. Thin walls. (M 8.)

Cf. *AM* 1929, 130, fig. 23, 1; also *AM* 1912, 392, fig. 10, from Smyrna.

2. Fig. 15. 10. Rim fragment of unpainted coarse ribbed ware. Purplish colour. Thin walls. (M.)

3. Pl. 22. 31. Alabastron-shaped vase. Preserved height 170. Coarse grey black clay, thin walled. Dent where base of ribbon handle was inserted. Ridged surface. (QA.)

Cf. *AM* 1929, 130, fig. 23, 2.

Medieval

Only these few fragments are worth publishing. Professor D. Talbot Rice very kindly contributed the comments which are based on photographs of the sherds and my descriptions. The references are to his book, *Byzantine Glazed Pottery* (1930).

1. Pl. 22. 36. Bottom of plate or bowl. Yellowish glaze, mottled brown. Eagle with reverted head. The incised lines have a dark glossy tone. White underneath the glaze. Outside, trickles of glaze.

'This belongs to quite a common group—a sub-division of B 3, late sgraffito ware. It is an early variety, where the design is engraved thinly, as in early sgraffito ware (B 1), but the presence of brown glaze over the body of the bird distinguishes it from the typical early sgraffito. The characteristic of this sub-group is in fact the Bovril-like glaze, which distinguishes it from later variants, where green, or brown and green, are used to supplement the engraved outline. But the drawing of the bird indicates that it is not very early; earlier ones are more realistic. It is probably to be dated about 1250.'

2. Pl. 22. 38. Rim. White glaze over white slip. Incised lines black. Loop of circles within line border.

'Early sgraffito ware (B 1); but it is decadent and late and might well be contemporary with the above.'

3. Pl. 22. 37, 39. Rim and base. Whitish rather friable clay. Rim, black painted lines, yellow and blue. Base, floral designs of yellow flowers on blue stalks. Outside plain.

'Decadent variants of group A 1. May be *c.* 1200, but perhaps later.'

LAMPS

Only a few fragments of lamps were found, and those are of no special distinction. The following are the only ones worth noting.

1. Open type with pinched in lip. Coarse fabric. (Acropolis.)
Seventh century.

2. Diam. *c.* 90. Broneer (*Corinth* IV) Type I. (YD.)
? first half sixth century.

3. Pl. 22. 9. Arrow-shaped handle. Length 65. Thin red varnish with a hard glint. Palmette surmounting a pair of dolphins. (A.)
Broneer Type XXI; *cf.* Dragendorff, *Thera* II, 82, fig. 292a. First century B.C.

4. Pl. 22. 11. Fragment of moulded lamp. Lion in relief.
Cf. Broneer Type XXVIII, 1216 ff. ? third century A.D.

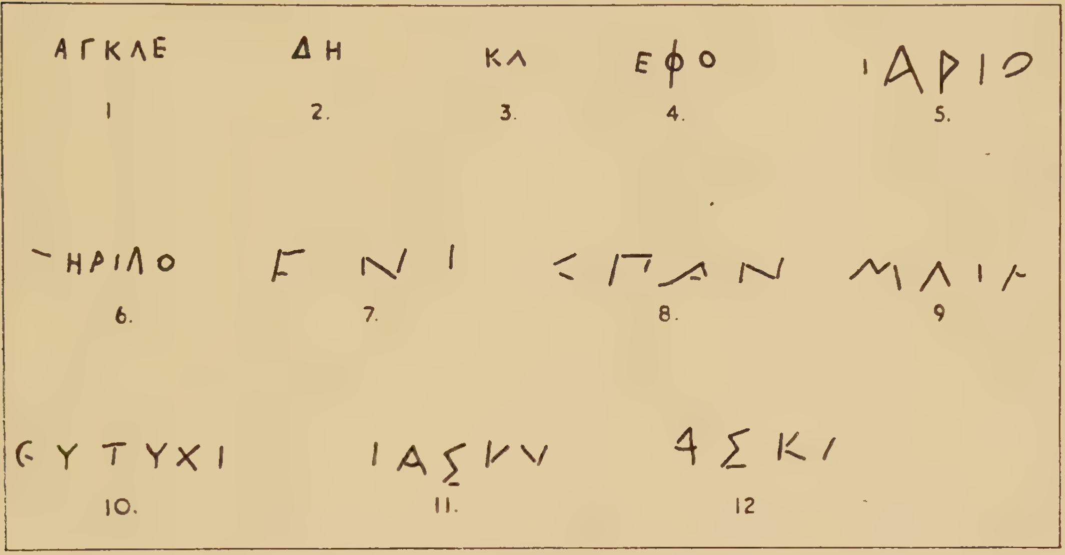

FIG. 16.—GRAFFITI ON POTTERY.

INSCRIBED SHERDS (Fig. 16) [57]

The following are all graffiti. No painted inscriptions were found. Except for nos. 2–4 they all come from cemeteries. Some perhaps may be the name, inscribed during his lifetime, of the owner of the vase which was buried with him. Others, especially the later ones, suggest valedictory inscriptions.

The forms of the letters here reproduced may be considered approximately correct, but my notes do not indicate whether there is a gap or a break at either end of the graffito.

1. Black glaze. . . . αγκλε . . . (M fields.)
2. Base of fourth-century kotyle. ΔΗ. (YB.)

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[57] See also Attic fifth–fourth century, no. 1 (p. 58).

3. Cup rim. ΚΛ. (YD.)
4. Hellenistic base. . . . εφο . . . (D.)
5. Coarse gritty black. . . . αριο . . . (M fields.)

Perhaps sixth century. This is the only early inscription.

The following are all coarse red weathered sherds. They all come from the M fields, except no. 8 from Q.

6. . . . ηριλο . . .
7. . . . ε̣νι̣ . . .
8. . . . σ̣παν . . .
9. . . . μλια̣ . . .
10. . . . ευτυχι . . .
11. . . . ι̣ασκυ̣ . . .
12. . . . ασκ (α or λ) . . .

APPENDIX

CHRONOLOGY OF CYCLADIC POTTERY

Siphnos, like other Cycladic sites, has unfortunately provided no stratigraphic evidence.[58] Any attempt at a chronological arrangement must therefore be mainly dependent on the evidence of style. I shall deal principally with the orientalising pottery and, since only two examples from Siphnos throw any light on this period, most of my deductions are based on the finds from other sites.

There are four main groups of Cycladic pottery: Theran, Melian, Parian, and Naxian. Theran does not concern us here, since it has not so far been found outside Thera.[59] For a clearer view of the Melian style we must wait for the long-expected publication of the Rheneia find. The Parian and Naxian styles are still imperfectly known, but, following the exploratory work of Payne and Buschor, Karusos, in his publication of the Aphrodite amphora, has done much to bring the two styles into sharper focus.[60]

Another group of less importance must also be discussed here, Ad in the classification of Dugas and Rhomaios,[61] tentatively assigned by Buschor to the neighbourhood of Siphnos.

Parian

The earliest phase is Dugas' group Aa which leads up to Pfuhl's ' besondere Gruppe.' (*AM* 1903, J 14–17 and the amphora in Munich;[62] the small group *Délos* XV, Ac also appears to be related).[63] At this stage the traditional amphora underwent a gradual metamorphosis, both in shape and decoration, which can be followed over a considerable period. The body became gradually more ovoid, the neck profile curvilinear. The handles were set at an angle instead of vertically. The lower part of the body was painted black with a few reserved lines; later, a stand was added to the base. The shoulder began to be decorated in panels, at first with wheels and circles, later with orientalising patterns. On the neck the vertical waves appeared which soon ousted all other patterns and became the hall-mark of the Parian orientalising amphora.[64] The dot pattern had a short life on the amphora, but it had a long vogue on smaller vases, mostly skyphoi with offset rims. Most of the published finds from Paros, as well as those from Siphnos,[65] belong to this linear style which probably ran parallel with the orientalising amphorae. It is a pity that the interesting finds from the Delion in Paros have not been published,[66] since they would throw still further light on this period.

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[58] The Cycladic material from Thera is restricted, with very few exceptions, to Theran and Parian. The most that can be deduced from it is the relationship of Theran and early Parian, but in many cases the evidence is doubtful as the graves were almost always used for several burials as in Crete.

[59] A sherd on the Acropolis: Graef 312. Possibly the amphora fragment no. 19 above. A few other exceptions are given by Payne in his review of Kunze's *Kretische Bronzereliefs*, *JHS* 1933, 123.

[60] *JdI* 1937. I should also like to pay a tribute to the painstaking publication of the pottery from Rheneia and Delos by Dugas and Rhomaios in *Délos* XV, XVII. Even if one may quarrel with the classification, their systematic presentation of the material, coupled with the excellent illustrations, makes it a really valuable contribution to the study of Cycladic pottery.

[61] *Délos* XV.

[62] Sieveking Hackl p. 44, no. 456.

The orientalising stage is known to us, with a few exceptions, only from the graves in Thera. So far, no examples have been found in Paros or Siphnos. There are a few amphorae in European museums, the provenance of which, if known, is Thera. From Delos come only a small early amphora (Ab 19) and a fragment of another (Ab 20). The griffon jug may perhaps be added to the list, but it has too many strange features to allow us to relate it confidently to the series we know.[67]

In the chronological table I have attempted to give some approximate dates. The 'besondere Gruppe' is probably to be dated about 725. The transition to the new type of Parian amphora falls within the last quarter of the eighth century. The early amphorae with circle decoration will be about 700. The bulk of the orientalising amphorae in Thera belong to the first quarter of the seventh century.[68] Pfuhl J 7, one of the latest, cannot be much earlier than the griffon jug [69] and roughly contemporary with the Naxian amphora *Délos* XVII, Bb 1. Of the three later amphorae,[70] Leyden appears to be contemporary with the Naxian protome amphorae (*Délos* XVII, C), Stockholm somewhat earlier,[71] and Cabinet des Médailles a little later—a little later, too, than the Burgon lebes.[72]

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[63] Ac 10, 11 appear to be Naxian. Karusos (*JdI* 1937, 190, n. 3) believes the whole group to be Naxian. See my remarks on the Ad group below.

[64] The transition can best be followed in Dugas' group Ab.

[65] Although I have not had an opportunity of comparing linear Parian from Siphnos with that in Paros, I do not think, judging from memory, that there is any distinction of fabric between the two.

[66] Cf. *AA* 1900, 20; *ibid.* 1923–24, 118.

[67] The lion and the stag are certainly very close to Pfuhl J 7 but I do not think anything else about the vase is strikingly Parian. Payne's arguments (*JHS* 1926, 205) have, however, convinced Dugas (*Délos* XVII, 7, n. 3). The style is certainly quite unlike Naxian, although certain features of the decoration can be paralleled there—no doubt because they are part of a Cycladic koine. For instance, the same type of maeander occurs on *Délos* XV Bc 6, which is apparently under Cretan influence, and perhaps the fragment Buschor, Beil. LIII, 3; cf. *Délos* XV, Ac 10, f. For the sudden change of pattern in one frieze, *cf.* the Naxian amphora *Délos* XVII, Ba 8 (lozenge to maeander). The find of a griffon's head in Naxos (*AM* 1929, 156) also shows that the type may not have been confined to Paros.

[68] This dating does not account, if Johansen's dating is followed, for the striking resemblance of the birds on these vases with those on Protocorinthian globular aryballoi from Cumae, a connection which seems to be confirmed by one of the grave groups in Thera (*Thera* II, tomb 90), where two globular aryballoi were found with a developed orientalising Parian amphora. The same difficulty is encountered in the dating of Protoattic. See *BSA* XXXV, 203, where J. M. Cook proposes 700 as a more likely date for the transition from globular to ovoid aryballoi. This date would seem to be in line with the chronology advanced by Payne in *PV*.

Naxian [73]

The earliest identifiable Naxian vases are the amphorae and oinochoai *Délos* XV, Bb and the fragments illustrated by Buschor in *AM* 1929. These lead to what I call the heraldic group (*Délos* XVII, Ba). As Karusos remarks, there is only one vase which can be regarded as transitional, the oinochoe Bb 20, but I think with him that there can be no doubt of the connection. From this point onwards we have a much fuller series than we have of Parian. The culmination I now believe to be Dugas' group C.[74] Before giving my reasons for this, I will deal with the intervening period. The goddess from Siphnos is perhaps the most important as a link between the two. It is nearer in date to the heraldic amphorae, and the connections with these are therefore more obvious—so obvious in fact as to be scarcely worth enumerating. The most striking perhaps is the maze on the back of the dress. The silhouette animals have no parallel,[75] but this is not surprising as the outline style is hardly suited to embroidery. The floral motive down the sides shows that the goddess is a trifle more advanced than the heraldic amphorae and provides another link with the Aphrodite vase, where it occurs in precisely the same form. It is this floral motive which we find in a new and abbreviated form on the protome amphorae (*Délos* XVII, C). About contemporary with the Siphnos goddess is the amphora *Délos* XVII, Bb 1. The style of the lion and the caricatured human figure have led Karusos to date this too early. The lion is placed under the handle, a place which has hitherto held nothing better than an eye. The man is on the back of the vase which was regularly used by the Naxian painter for fantastic sketches more notable for their imagination than for their style. Hence, we may reasonably assume that the main picture on this vase was something much more impressive. The lotus frieze is a surer indication of its date. Very little later is the chariot amphora (*Délos* XVII, Bc 2) and the probably contemporary kotyle in Delos (*Délos* X, 41).[76] In this period, too, we must include the imitations of Melian (*Délos* XVII, Bc 18–21).[77] The Aphrodite vase must come soon after as it cannot be separated too far from the Siphnos goddess.

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[69] *Cf.* the Protocorinthian plastic vases Payne *PV* pl. 25, dated to the second quarter. Karusos assigns the griffon jug to the last quarter of the eighth century on the strength of its being contemporary with the Cumae jug. See below.

[70] Discussed by Payne *JHS* 1926, 205 ff.

[71] Hampe (p. 56) places it in the first quarter. Against this, Cook, *op. cit.*, 207.

[72] My list of Parian in the Delos publication agrees with Karusos' except that he includes *Délos* XVII, C and excludes *Délos* XV, Ac. I have omitted the group of skyphoi Ae, most of which are of course Parian.

[73] I had already reached the same conclusions as Karusos (with the exceptions noted below) about the Naxian group before reading his article, thanks to Buschor's illuminating publication of the sherds in Naxos. I note this for what it may be worth as a confirmation of Karusos' grouping.

[74] The connection, first noted by Dugas in *Céramique des Cyclades*, was forcefully refuted by Payne (*JHS* 1926, 203 ff.), who pointed out the very close similarities with the 'linear island' (Parian) style. Payne's view was adopted by Buschor and Karusos and also by myself at the time when I reviewed *Délos* XVII (*JHS* 1935, 248). Dugas remained unconvinced (*Délos* XVII, 21), and I now believe him to be right.

[75] But *cf.* the lion on the heraldic amphora from Thera.

One of the most distinctive features of the protome amphorae is the rendering of the lower jaw of the horses. We find it on a miniature imitation Melian vase which is certainly Naxian (*Délos* XVII, C 11).[78] It is unfortunate that there is a break on the chariot amphora just at this crucial point. I am convinced that these horses were of exactly the same type. At any rate they have a magnificent set of teeth like the horses on the protome amphorae. The Aphrodite vase is equally tantalising; the surviving lower contour of the jaw is, however, suggestive.[79]

Apart from this, I may call attention to several other points which connect these vases with Naxian.[80] Firstly, horse protomes already occur as a favourite motive on the heraldic amphorae.[81] The floral we have already dealt with. The interlacing arcs are common on the heraldic amphorae, although they were probably copied from Parian. The lozenge cross is derived from the star pattern, formed by superimposing a lozenge on arcs. The skyphoi, *Délos* XVII, Bc 9, 10, are a regular Naxian type, with high rim and unconventional rim pattern. There is a precedent for the griffons on the later examples of the series on the skirt of the Siphnian goddess. It is perhaps worth adding that the neck of C 13 is related to the regular Naxian type. Finally the decoration of the neck as well as the shoulder is not a Parian characteristic as Payne himself pointed out (*JHS* 1926, 210).

On the other hand, the parallels advanced by Payne, particularly with the Leyden vase, are most striking. I believe, however, that the similarity signifies no more than that the two vases were exactly contemporary. We know that Naxian artists were eclectic, and it is not surprising that they should copy their Parian rivals as successfully as they did the Corinthians.

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[76] The kotyle *Délos* X, 44 belongs to the last quarter of the century together with most of the polychrome plates. The crater *ibid.* pl. 9, 39 is hardly earlier than the second quarter of the seventh century. The lozenge ornament occurs on the protome amphorae. The handles are decorated like those of Melian vases. For the vertical maeander (not a Geometric type) *cf.* Bc 21 and the centre stripe on the Siphnos goddess.

[77] Closely related to Melian vases decorated with animals, mostly horses, in outline style. The Athens amphora with riders (*MuZ*, 105) belongs to this period. Bc 19 is contemporary with the 'storm spirit' amphora mentioned by Payne *NC*, 78. I withdraw the suggestion I made in *JHS* 1935, 248 that these vases are actually Melian.

[78] Note the now familiar Naxian floral. Dugas has already pointed out the close parallels between this vase and the protome skyphos illustrated on the same plate.

[79] The left-hand winged horse on the skirt of the Siphnos goddess shows an embryonic version of the down-swung jaw. One of the lions in the bottom panel has a flame-shaped tongue exactly like those on the C group amphora and skyphos (*Délos* XVII, pl. 15 a, 20. 9a), but unfortunately this panel is only just visible to the naked eye, let alone in a reproduction.

[80] Other arguments, including a strong one—that of fabric—are advanced by Dugas in *Délos* XVII, 21; cf. *ibid.*, 8 where the amphora Bc 1 is noted as another link between the two groups.

[81] Horses are rare in Parian (*Thera* II, fig. 406; griffon jug). Karusos contrasts the horses on the heraldic amphorae with those on the protome amphorae, but it is evident that the distinction is one of date rather than style.

I date the protome amphorae to the middle of the seventh century. After these comes a series of amphorae and hydriae under Rhodian influence. Melian potters turned in the same direction for their ideas until the last quarter of the century, when they turned back to Corinth, using their own technique of white lines in place of incision. Corinthian ware had already been imitated in Naxos, but at an earlier date. The kotyle *Délos* X, 41 belongs to the second quarter, the conical oinochoe *Délos* X, 37 probably to the last years of the preceding century, when snakes were popular in Protocorinthian and, in plastic form, on Protoattic vases. To the same period belong the Naxian amphorae with wavy bands on their shoulders (*Délos* XV, Bb). The heraldic amphorae come in with the beginning of the century, and are thus contemporary with the general run of Parian amphorae in Thera.[82]

My dating of the Aphrodite vase and the contemporary Melian Apollo vase coincides with that advanced by Karusos. I cannot agree, however, with his early date for the heraldic amphorae[83] and the early Melian fragment in Berlin, both of which I would place in the first quarter of the seventh century.[84] The nucleus of his chronology for the early period seems to be the Cumae jug, which was found with globular aryballoi and a purely Geometric ring vase. This tomb group, if reliable, certainly presents difficulties. Indeed these difficulties are inherent in the whole question of the dating of the globular aryballoi, which seem artistically so far ahead of their time—ahead even, it now appears, of Cretan orientalising, by which they are usually supposed to be influenced. It is then only a slight alleviation if the Cumae jug is really not a Naxian work at all but, as I have sometimes supposed, local Italian. A comparison with Würzburg 730[85] lends weight to this view.[86] The fact remains, however, that we appear to have a flourishing orientalising style in Italy which has undoubted stylistic relations with Naxian work of at least thirty years later according to my chronology. But any attempt to adjust the chronology of Naxian meets with difficulties. We can now follow every step between the heraldic and the protome amphorae, and the interval between the two is clearly not very great To place the heraldic amphorae say twenty-five years earlier necessitates a corresponding adjustment of the protome amphorae. In the light of the internal development of the Naxian style and its later relations with other fabrics I feel compelled for the present to discount the evidence of the Cumae jug.

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[82] *Cf.* the large cable on the back of *Thera* II, fig. 403 with Ba 3, 6. Pfuhl, J 7 is clearly the Parian retort to the heraldic amphorae.

[83] *JdI* 1937, 192, n. 3. Be it said that Karusos' version is a considerable modification of Kunze's still earlier dating.

[84] The running dog kotyle found with the Naxian amphora in Thera can hardly belong to the last quarter of the eighth century as Karusos suggests. This would be unlikely, even if we keep Johansen's date for the transition period.

[85] Cycladic connection noted by Watzinger (*Gnomon* 1934, 573).

[86] Payne seems to have considered this view but abandoned it on grounds of technique (*JHS* 1926, 205, n. 10). The feasting lions are a favourite western motive, although also popular on Boeotian fibulae. Grazing horses are rare in Cycladic (Subgeometric: *Délos* XV, Bb 8, Bc 4) before late Melian. They are, of course, common in Attic from Geometric times.

Délos XV Ad

This group still remains a mystery. The Siphnian finds have added nothing to our knowledge of its identity, although they have produced a few new shapes.[87] The fabric at its best is closely related to the Ac group[88] (and hence to Pfuhl's 'besondere Gruppe'), as Rhomaios has already pointed out. The surface is a warm brown and the varnish good and black.[89] Often, however, the surface is grey, sometimes with pock marks, and in general appearance not unlike Melian.

The earliest vases thus seem to have a link with Paros.[90] One is led to suppose that this group and the Parian orientalising amphorae both spring from a common stock—the 'besondere Gruppe.' The lower limits still remain obscure. The choice lies between *Délos* XVII, group D, backed by Buschor, and Melian, backed by Rhomaios and Dugas. It is impossible to estimate the latter theory until the Melian collection in Mykonos has been published. It is certainly significant that Ad appears to die without issue at about the same time as Melian is born, but, from my recollection, the early Melian vases referred to by Rhomaios cannot be regarded as a development of Ad, although they must certainly be nearly contemporary. The absence of examples of the D group from the finds in Siphnos does not really prove anything, except that if Buschor's sequence is right, the group is unlikely to be Siphnian.

If my theory as to its origin is correct, the Ad group must be contemporary with the early Parian ('new style') amphorae, *i.e.*, about the first quarter of the seventh century.[91] The earliest Melian vases[92] must accordingly be dated to the same period.

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[87] This does not prove that these vases were made in Siphnos, since there are several examples in Paros from the Delion, including skyphoi and some unusual shapes, which unfortunately still remain unpublished. J. M. Cook informs me that vases of this fabric are also reported to have been found in Kimolos.

[88] The fabric is often indistinguishable.

[89] The relation with Ac is not one of fabric alone. Ac 6, 7, 9 have a strong resemblance to Ad. Our amphora no. 10 perhaps belongs to a transitional stage. The horse's mane is very like that on Ac 9. The fragment with a bird is closer to Pfuhl, J 14.

[90] I was at first inclined to think that the 'besondere Gruppe' was the Geometric stage of Ad and therefore Parian and that the home of the Ab group and 'Euboic' amphorae in Thera was still to seek. But it seems impossible to draw a hard and fast line between the 'besondere Gruppe' and the early Ab amphorae.

[91] The early appearance of rays in an otherwise undistinguished fabric is something of a puzzle.

[92] The 'bowl' *CVA Providence*, pl. 4 is early Melian, not Naxian.

CHRONOLOGICAL TABLE

CORINTHIAN	ATTIC	PARIAN	NAXIAN	MELIAN	Ad	
↑		‘ Besondere Gruppe ’	Subgeometric			725
					Ac	
Globular			Snake amps. Con. Oin.			
↓	Analatos				Transitional	
Bf 1		Amps. in Thera	Heraldic			700
	Munich krater			Early Melian		
					Amphorae in Mykonos	
	Thebes krater		Bb 1			
Bf 2		Griffon jug	Siphnos goddess Delos kotyle Chariot amp.	Outline style *MuZ* 105		675
	Menelaos		Melian imit.			
	New York Nessos	Stockholm	Aphrodite	*MuZ* 108		
Late PC	Ram jug	Leyden	Protome Rhodianising	Rhodianising		650
Transitional		Cab. des Méd.				
	Kynosarges					
EC	Nessos			*MuZ* 109, 110 Corinthianising		625

IV. THE ROMAN GRAVES OF THE FIRST CENTURY A.D.[93]

These graves, mainly of Roman but a few of earlier date, came to light as the result of excavations carried out, with slight interruptions, between 15 May and 13 June, 1935, in terraced fields on a slope lying to the south of the Kastro, across the river-bed which runs eastward to the harbour. The position of the area will be clear from the map, where it is marked ‘ Ancient Cemetery,’ and from the view in Pl. 3. 1, which, looking south-east, shows the Kastro on the left, the two churches of the Aghios Taphos in the foreground, and, in the distance, a little to the right, a small, flat-roofed chapel, which is entered on the map, close to the pathway leading to Pharos, on the 30-m. contour line. A little beyond and above this chapel, the eastern ends of the terraced fields can be seen at the right-hand (western) edge of the photograph.

The area, as a whole, seemed the most probable site of the ancient necropolis. Local tradition and stories of finds by cultivators supported this view. The lowest terraces are vineyards, but the six terraces in which we excavated carry desultory cultivation of barley, beans, and chickpea.

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[93] I am greatly indebted to Professor Bernard Ashmole, Mr. D. B. Harden and Mr. Denys Haynes for help in the preparation of this part of the report, and to Professor Ashmole for permission also to publish the objects from the British Museum illustrated in Figures 18, 19 and 24.

It was in hopes of finding important Geometric and Archaic burials that we obtained leave from the owner to excavate in these six terraces subject to the usual stipulations, namely, the restoration of the soil and surface to their previous condition as soon as the excavation should be finished and the payment of compensation for loss of harvest together with an agreed sum in respect of anticipated finds.

These hopes were disappointed. Apart from the single Late Geometric pithos (No. 15, pp. 37, 89, Pls. 13. 6 and 24. 1), the few featureless archaic pots in Nos. 9 and 11, the fragmentary pelike, No. 12, and the small group of Hellenistic graves, no Greek burials were found. In portions of the third and sixth terraces some Geometric and seventh-century sherds were found intermingled with Roman pottery. The fifth and sixth terraces yielded also a limited quantity of sixth- and fifth-century sherds. It seems highly probable that in the four lower terraces we have the site of the Geometric and Archaic cemeteries: but that the soil, which before the construction of the terraces cannot have been very deep at any point, was thoroughly disturbed in the Roman and Byzantine periods. It is significant that not only the few early Greek and Hellenistic burials, but all the Roman graves that can be attributed with confidence to the first century A.D., as well as the Roman building to the west of No. 4, rested immediately on the rock. A further indication is provided by the deposit No. 6, in which a Geometric steatite seal (Pl. 9) and some apparently contemporary beads (6 (13), (15) and (20); Pl. 29. 3) were found, together with glass and other objects of the first century, doubly enclosed in a large Roman jar (Pl. 30. 3) which was buried in a covered slab chamber. If any early Greek burials in this area survived through Roman and Byzantine times, they must have been opened and destroyed by more recent cultivators. Excavations among gaps in the vineyards below the sixth terrace in 1937 brought to light nothing beyond a few empty or disturbed later Roman graves.

On the other hand, the first century graves (Nos. 4, 5, 14, 20, 22, 23, 24 and the deposit No. 6) produced an unexpected wealth of ancient glass, some of it of considerable artistic and historical importance. Three of these graves are dated by Flavian silver coins. No. 14 contained a denarius of Vespasian of the year 75 (Pl. 31. 1); No. 20, a denarius of Vespasian of the year 70–71 (*ibid.*) and one of Titus of the year 80 (*ibid.*). No. 23 contained another of Vespasian, probably of the year 77–78. All these coins show little sign of wear and must have been in good condition at the time of deposit, particularly the denarius in No. 14. No. 22 contained no coin, but in view of its situation adjoining Nos. 20 and 23, and of its contents, must be dated with the other two. No. 24 contained a fifth denarius, too worn for identification. I am indebted, however, to Mr. Harold Mattingly, who saw this coin in 1936, for the opinion that it looked more like a coin of Tiberius than anything else. This would be consistent with the date of the adjacent tombs. No. 13, containing one fine beaker (Pl. 30. 4), must, from its position, be appreciably later than No. 14, and may belong to the third century.

No coins were found in the group which includes Nos. 5 and 6, each of which contained a Roman Syrian mould-blown glass with an inscription, that in No. 6 being of a shape that has not been found elsewhere. The remaining Roman contents of Nos. 5 and 6, however, point clearly to a date in the first century A.D., slightly earlier, if anything, than that of the graves which contained coins. It happened that Mr. D. B. Harden was about to publish two tomb-groups from Syria of the first century A.D. containing similar glasses, together with a supplement to the list of then known Roman–Syrian glasses with mould-blown inscriptions, shortly after our two specimens were unearthed. The opportunity of including these in so appropriate and authoritative a publication was not to be missed. They were accordingly communicated to Mr. Harden, with photographs, and published in his article which appeared in *Syria* XXIV, 1944–45. As already noted, the vases themselves are now in the Benaki Museum.

The lay-out of the terraces and the relative positions of the tomb-groups can best be gathered by reference to a photograph taken in 1936, after excavations in all six fields had been concluded, and the land restored to its former condition (Pl. 23. 4). On the left can be seen the small, flat-roofed chapel and the pathway to Pharos. In the upper half of the picture, near the centre, are the ruins of a Byzantine church, also marked on the map, on the boundary line between the first and second of our terraces, counting from the top. No graves were found in any of the first four terraces. In the fifth terrace, a very short one extending less than half-way across the area from the east, was found a small group of Hellenistic graves (Nos. 1 to 3).

In the sixth terrace, a large rock will be noticed, towards the eastern end. This rock has an ancient cutting, apparently intended for a statue-base, on its shoulder. Two Roman graves, which probably belong to the second century, Nos. 7 and 8, lay close together at the south-west angle of this rock. Two metres to the west is a square masonry plinth, which may have borne a monument, and one metre farther west was the deposit No. 6, contained in a small chamber formed of stone slabs, and covered by a slab measuring 0·65 m. × 0·45 m. Next to this, on the same level and clearly associated with it, was No. 5, a slab grave, with head south-west. On the other side of No. 5, and at right-angles to it, with head to south-east, was

No. 4, a well-built tomb (Pl. 24. 4), the roof slabs of which were embedded in a thin layer of plaster. A retaining wall protected the head of No. 5 and the south-west side of No. 4.

About 5 m. from Nos. 4 and 5, and 11 m. W.S.W. of the rock-cut base, is the south-east corner of a Roman building, the southern wall of which is 4 m. in length. The entrance was on the west side. The foundations of this building are on approximately the same level as the group of graves, 1·5 m. below the present surface, but we found no evidence to connect it with the graves.

36 m. to the west of the 'statue base,' in the sixth terrace, stands a small olive tree, the shadow of which can be seen more clearly than the outline of the tree itself, below the western extremity of the fifth terrace. This tree, equally convenient as a measuring point and as a clothes-rack, appears also in Pl. 23. 1 and 2. Around it, in a complex of late Roman walls, lay Nos. 11, 12, 13, and 14 on the east, and Nos. 16 to 18 on the north-west. 3 m. to the east is a square masonry pillar (Pl. 24. 5) which seems to have been the headstone of No. 14. A small column, found beside it, is shown erect on the pillar in the photograph. The covering slabs of No. 14 lay 1·4 m. below the surface. No. 13, an obviously later grave, overlay the eastern end of No. 14.

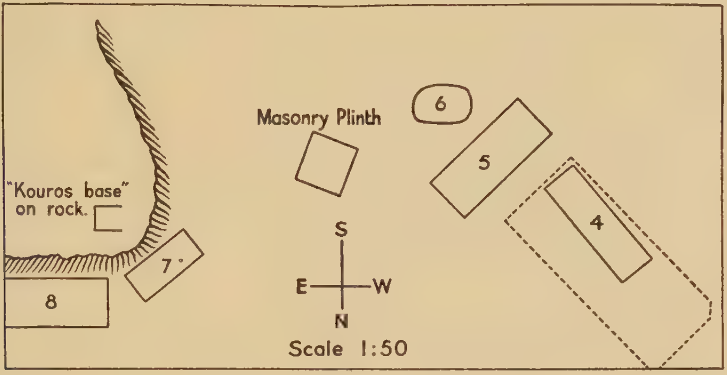

Fig. 17.—First Group of Roman Graves (Eastern End of 6th Terrace).

Nos. 19 to 24 lay in the field next above the western half of the sixth terrace. We called this the 'fig-tree' terrace from the branching fig tree which can be seen clearly in Pl. 23. 3 and 4. No. 19, a small empty sarcophagus of late Roman date, lay 3 m. to the west of this tree (Pl. 23. 3). No. 21 lay underneath No. 19. Nos. 20, 22, 23, and 24 lay close together, 3 to 4 m. farther west. These last were slab graves with no masonry in their construction. Some of the slabs can be seen standing against the terrace wall in Pl. 23. 4. There was no trace of any headstone. The graves were on the rock-level, Nos. 20 and 22 about 1·2 m. below the present terraced surface, and Nos. 23 and 24 about 0·3 m. higher, following the slope of the rock.

Catalogue of Graves and their Contents

In the fifth terrace at a depth of about 1·5 m.

No. 1. Child's grave, of stone slabs (Pl. 24. 2).

(1) Clay kalathos, unpainted, with handle. H. 0·07 m.
(2) Clay female figurine, much pulverised. H. 0·16 m.
(3) Iron nails.
(4) Fragments of stephane: lead, with bronze-gilt leaves.
(5) Silver coin, Attic, obv. head of Athena: rev. owl. Diam. 0·008 m.
(6) Twenty-two knuckle-bones.

No. 2. Collapsed grave (also of child), similar to above.

(1) Fragments of stephane.

No. 3. Collapsed slab grave.

(1) Fragmentary clay mask. Bearded head. H. 0·05 m.
(2) Clay lamp. Diam. 0·065 m.
(3) Iron strip. L. 0·06.
(4) Iron nails.

No 4. Masonry grave, covered by two stone slabs, 0·8 m. below surface. North-east side wall consists of a single stone slab, the opposite wall of three courses of roughly dressed marble blocks. Pl. 24. 4.

(1) Pl. 25. 1. Bluish-green glass toilet-bottle. H. 0·107 m.
(2) Pl. 25. 1. Bluish glass toilet-bottle. H. 0·085 m.
(3) Pl. 25. 1. Dark-blue glass toilet-bottle. H. 0·085 m.
(4) Pl. 25. 1. Fragment of bone rod, with lathe-turned decoration, fitted with horizontal bone disk near head. L. 0·075 m.
(5) Pl. 25. 1. Another piece of the same object, terminating in a circular loop. L. 0·048 m.

For a similar loop and disk, the latter showing clearly the mark of the rod fitting on to it, see No. 6 (11) and (12) (Pl. 36).

For similar bone rods *cf.* Nos. 7 (3), 14 (7), with fragmentary bone button (8), 20 (7), with loop (7), and perforated button (8) (Pl. 36), and 22 (14) (Pl. 36).

The exact purpose of these objects is not clear, but they are evidently toilet implements. The accompanying illustration (Fig. 18), is from the Comarmond collection of Roman finds from Lyons and the neighbourhood, purchased for the British Museum in 1851. It differs in having a plain shaft, and a female figurehead instead of a button or disk.

Loops were not found with Nos. 7 (3), 14 (7), and 22 (14): but if these did not end in loops, yet another type remains to be explained. The shafts are too thick for stirring rods and of a form unsuitable for pins.

No. 5. Stone slab grave. 1 m. below surface.

(1) Pl. 25. 3; 26. 2–3. Yellow-green glass beaker, mould-blown in tripartite mould, with inscription ΚΑΤΑΙΧΑΙΡΕ ΚΑΙ ΕΥΦΡΑΙΝΟΥ. H. 0·078 m.

Now in the Benaki Museum, Athens. *Cf.* Harden, *JRS* XXV (1935), 171, 172, pl. xxv *a*, *b*, *c*, xxviii, 10, and *Syria* XXIV, 1944–45, where this glass is published, pp. 87, 88, 90, 91, pl. viii, 3 and 4.

(2) Pl. 28. 1. Glass bowl. Bluish glass. H. 0·65 m.

(3) Ten fragments of glass bowl and bottle.

(4) Pl. 26. Bronze curb chains and wire loops, for carrying or hanging some object. Diameter of rings 0·028 m. (*cf.* 22 (8), Pl. 35).

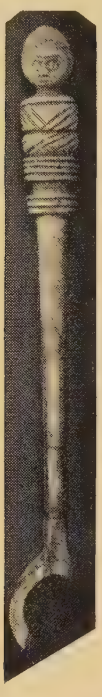

Fig. 18.—B.M. 51. 8–3. 108.
Scale 1 : 2.

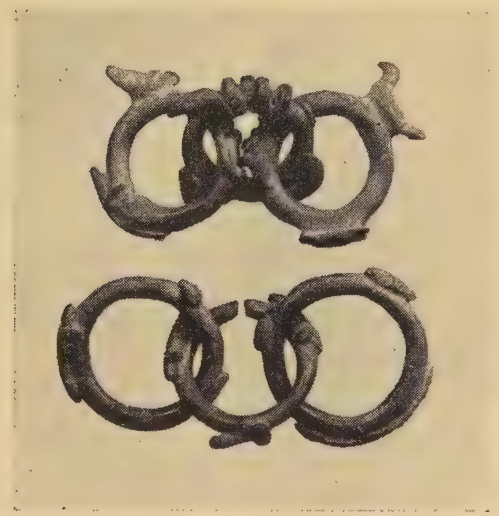

Fig. 19.—B.M. 68. 1–10. 334 and 335.
Scale 2 : 3.

(5) Iron spatula with spiral handle. L. 0·071 m.

(6) Iron nails, with fragments of wood adhering.

(7) Pl. 31. 1. Amethyst. L. 0·02 m. In the National Museum, Athens.

(8) Pl. 31. 1. Ditto, with fly engraved on convex side. L. 0·013 m. In the National Museum, Athens.

(9) Pl. 31. 1. Yellow paste gem, unengraved. L. 0·019 m. In the National Museum, Athens.

(10) Pl. 31. 1. Circular red stone. Diameter 0·012 m.

(11) Pl. 31. 1. Mauve stone. L. 0·013 m.

(12) Pl. 31. 1. Gem. Dark green paste, with dark blue band, flanked by narrow white bands. Engraved, two cows moving to right, and flowers. L. 0·017. In the National Museum, Athens.

This type was common in the last decades of the Republic and early decades of the Empire: see, e.g., *British Museum Catalogue*, p. XLVII; Furtwängler, *Antike Gemmen* III, 220–221. Berlin No. 5546 is of this material and apparently of the same design.

(13) Piece of gold leaf.

(14) Vase fragment of reddish glass paste.

(15) Flat grey stone with bevelled edges, 0·06 × 0·037 × 0·008 m.

(16) Pl. 26. Amulet consisting of three cast bronze rings bearing apotropaic emblems, interlocked, the central ring being cut to permit of this. Diam. of rings, about 0·025 m. *No.* 6 (23) is similar; *cf.* also the two examples from the Woodhouse collection shown above.

(Fig. 19). The emblem most favoured seems to be the comb (pudendum muliebre), but birds, shells, phalli, lizards, and snakes are represented also.

(17) Pl. 25. 2. Pair of bronze hasps, engraved. L. 0·07 m.

(18) Pl. 27. 2. Bronze lock-plate (fragmentary) L. 0·07 m. Nails, and key (also in Pl. 26). L. 0·048 m.

(19) Fragmentary bronze mirror-disk.

(20) Pl. 26. 1. Two bronze rings (Diam. 0·027 m.) attached through loops to knobs with pins. One shown.

(21) Pl. 26. 1. Two bronze rings (Diam. 0·024 m.) each with two iron attachments. One shown.

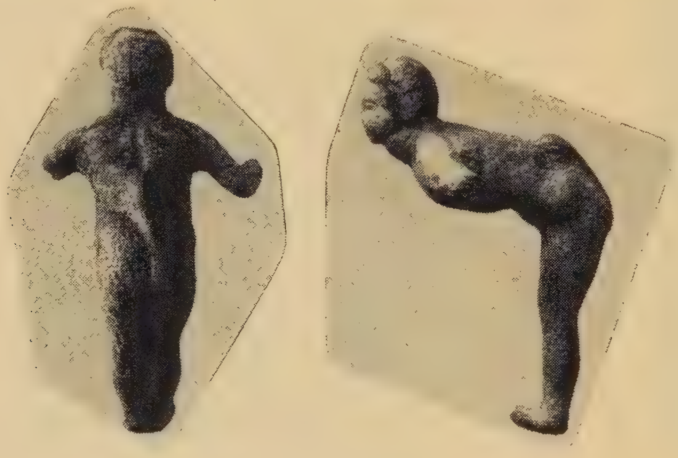

FIG. 20.—No. 6 (7).

(22) Pl. 27. 1. Two bronze strigils. L. (*a*) 0·215 m. × 0·15 m. (*b*) 0·21 m. × 0·14 m. One illustrated.

(23) Pl. 26. 1. Bronze handle. Width 0·058 m.

(24) Lead weight. H. 0·061 m.

(25) Pl. 27. 3. Bronze patera. L. 0·27 m.

(26) Bronze nail.

(27) Beads. Seven blue. Four yellow. Seven white.

No. 6. Stone slab chamber, covered by a single slab, 0·65 × 0·45 m. 1·15 m. below surface.

(1) Pl. 29. 1. Clay cup with spout. H. 0·058 m. See p. 72.

(2) Pl. 28. 3–5. Yellowish-green glass beaker, mould-blown in tripartite mould. H. 0·054 m. Diam. 0·06 m. Inscription: ЄUΦPAINOU ЄΦω ΠAPЄI in a continuous frieze, with second frieze containing zigzag and circle ornament (four circles). Now in the Benaki Museum, Athens.

For similar inscriptions see Harden, *JRS*, XXV, 1935, 173–5, pl. xxviii, 12, and *Syria* XXIV, 1944–45, 92, pl. ix, where this piece is published, with the remark that this is the only known glass of this shape.

(3) Pl. 28. 2. Blue glass beaker. H. 0·055 m.

(4) Pl. 29. 1. Two-handled glass flask, green, red-streaked glass, one handle dark blue and the other dark green. H. 0·082 m.

(5) Pl. 29. 3. Fragment of large two-handled glass flask. Yellow body, one handle green, the other blue. L. 0·08 m.

(6) Pl. 29. 2. Bluish glass toilet bottle. L. 0·135 m.

(7) Pl. 29. 3 and Fig. 20. Bronze statuette of faun, bending forward, with body almost at a right-angle to legs. Hands broken off. L. from top of head to heels, 0·037 m. × 0·035 m.

This seems to be the handle of some squat bronze vessel, with a short neck, probably an askos.

(8) Pl. 9. Geometric steatite seal of triangular shape, engraved with centaur on one side, ship on the other, and horse on the base. L. 0·025 m. See p. 28.

(9) Pl. 29. 3. Silver pin (fragment). L. 0·059 m.

(10) Pl. 29. 3 and Fig. 21. Bone counter, obv. head in relief, rev. the number 8 in Roman and Greek characters. Diam. 0·03 m.

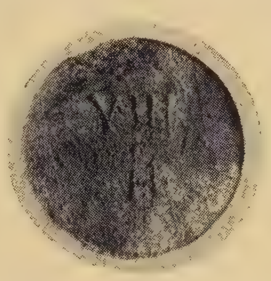

FIG. 21.—No. 6 (10).

(11) Fragmentary bone loop. Diam. 0·017 m. } See note on 4(4) and (5).
(12) Perforated bone disk. Diam. 0·025 m.

(13) Pl. 29. 3. Yellow-paste bead, with blue and white eyes.

(14) Pl. 29. 3. Perforated stone lentoid with engraved design. L. 0·018 m.

(15) Pl. 29. 3. Triangular bead with whorls at corners. L. 0·022 m.

(16) Pl. 29. 3; 35. 1–2. Blue-and-white glass button. Diam. 0·02 m. See note on 22 (15).

(17) Pl. 29. 3. Perforated wedge-shaped object, with incised hatching. L. 0·025 m.

(18) Pl. 29. 3. Perforated dark blue circular stone. Diam. 0·016 m.

(19) Pl. 29. 3. Tetragonal bead in pale blue paste. L. 0·013 m.

(20) Pl. 29. 3. Five beads with inset eyes. Diam. 0·012 m. (one shown).

(21) Three iron and wood fragments. 0·025/0·03 m.

(22) Bronze strip.

(23) Pl. 29. 3. Three linked bronze rings with apotropaic emblems, mostly combs. Diam. of rings 0·02 m. See note on 5 (16).

(24) Four scallop shells.

(25) Pl. 30. 3. Pithos, in which most of the above objects were contained, found in fragments, lying on its side. H. 0·60 m.

No. 7.

(1) Pl. 30. 1. Toilet bottle, with long neck and short, conical body. Green glass. H. 0·01 m.

(2) Pl. 35. 1–2. Two glass buttons, spiral design, (*a*) greenish blue and white, (*b*) deep blue and white. Diam. 0·025 m. See note on 22 (15).

(3) Fragment of bone rod. See note on 4 (4) and (5).

(4) Fragment of bronze mirror-disk. L. 0·05 m.

No. 8.

(1) Pl. 30. 2. Clay bowl, red glaze. H. 0·055 m. Diam. 0·11 m.

No. 9.

(1) Pithos. Unpainted. H. 0·26 m.
(2) Ditto. Fragmentary.

No. 10.

(1) Clay kotyliskos (one handle broken). H. 0·032 m.
(2) Ditto. H. 0·044 m.

No. 11. Archaic burials. Pl. 24. 3.

(*a*) Amphora (fragmentary). Unpainted. H. about 0·32 m.
(*b*) Crater (fragmentary). Unpainted, with foot. Diam. about 0·28 m.
(*c*) Amphora (fragmentary). Unpainted.
(*d*) Amphora (fragmentary). Unpainted.
(*e*) Amphora (fragmentary). Unpainted (not seen in pl. 24).

(*a*), (*b*), (*c*), and (*d*) contained burnt bones. (*e*), of which only half was found, contained charcoal, but no bones.

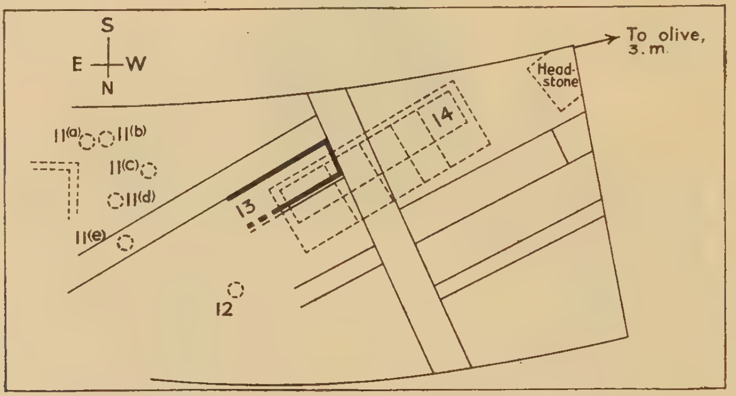

FIG. 22.—SECOND GROUP OF GRAVES (6TH TERRACE, AROUND OLIVE TREE).

No. 12.

Red figure pelike, much perished. Traces of tongue-pattern on shoulder. Diam. 0·26 m.

No. 13.

(1) Glass flask. Bluish glass, much flaked. L. 0·14 m.

(2) Pl. 30. 4. Green glass two-handled barrel-shaped beaker, with concave base. L. 0·08 m. In the National Museum, Athens.

(3) Pl. 30. 5. Fragment of small bottle. Bluish glass. L. of neck, 0·027 m.

This grave can hardly be earlier than the late second century A.D. since it partly overlay No. 14, which contained a coin of Vespasian.

No. 14. Masonry and slab grave, with headstone. 1·4 m. below surface. Pl. 24. 5.

(1) Pl. 31. 2. Bluish glass shallow bowl, phiale shape, moulded rib decoration. H. 0·04 m. Diam. 0·15 m.

(2) Pl. 32. 3. Dark-green glass toilet bottle. H. 0·095 m.

(3) Pl. 32. 6. Blue glass toilet bottle. L. 0·105 m.

(4) Clay bottle of same shape. H. 0·095 m.

(5) Pl. 30. 6–7. Four bronze rings with iron attachments. Diam. of rings varying from 0·019 to 0·024 m. Two illustrated.

(6) Bronze knob, fragmentary. Diam. 0·024 m.

(7) Fragment of bone rod. } See note on 4 (4) and (5).
(8) Fragmentary bone button. }

(9) Iron fragments, one with bone attached.

(10) Pl. 32. 5. Bronze lock plate, fragmentary, painted blue, with nails (one shown), and key (L. 0·033 m.); *cf.* No. 5 (18).

(11) Fragmentary bronze mirror-disk. Diam. 0·155 m.

(12) Pl. 32. 2. Fragments of bluish glass rhyton. Diam. of base, 0·05 m.: of mouth, 0·075 m.

The illustration of a complete specimen in the British Museum (from the Woodhouse collection found in Corfu) exhibits the shape (below, Fig. 24). The narrow end of these vases is perforated to form a spout. Our specimen seems to be the first found in a dated context.

FIG. 23.—UPPER STRATA OF TRENCH IN WHICH NOS. 13 AND 14 WERE FOUND (*see* FIG. 22).

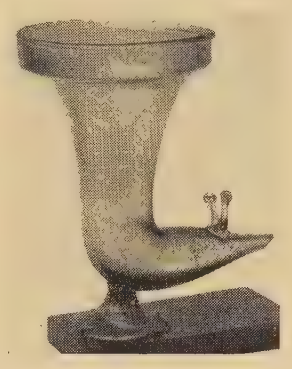

FIG. 24.—B.M. 68. 1–10. 510. Scale 1 : 3.

FIG. 25.—NO. 16: ONE OF AMPHORAE.

(13) Pl. 32. 4. Long-necked bottle flask, with ribbed body. Bluish glass. H. 0·163 m.

(14) Pl. 31. 3. Askos, fragmentary. Greenish glass. Diam. of base, 0·035 m.

(15) Pl. 32. 1. Fragmentary shallow bowl, with base ring. Bluish glass. H. 0·03 m. Diam. 0·19 m.

(16) Pl. 31. 1. Plain gold signet ring. Gem missing.

(17) Pl. 31. 1. Gold ball ear-rings, with small convex disks and S-shaped pins.

A Graeco-Roman type, common in the first century, A.D.; cf. *B.M. Catalogue of Jewellery*, Nos. 2616–17 (Woodhouse collection), 2618–19, and 2620–1 (from Cyprus): B. Segall, *Catalogue of Jewellery in the Benaki Museum*, No. 127, where this pair is mentioned.

(18) Pl. 31. 1. Denarius of Vespasian, A.D. 75 (*RIC* II, Vesp. no. 90).
Obv., Head of Emperor, R. Inscr. R. to L. of head IMP CAESAR VESPASIANUS AUG.
Rev., Seated figure of Pax. Inscr. L. to R. PON MAX T R P COS VI.

No. 15. In sixth terrace, close to lower retaining wall, at depth of 3 m. Pl. 24. 1.
(1) Pl. 13. 6. Late Geometric pithos, unpainted. H. 0·34 m.
(2) Skyphos, red glaze. H. 0·09 m.
(3) Oinochoe. H. 0·10 (with handle).

No. 16. In late Roman wall complex.

The upper halves of two amphorae, coated with plaster, empty, lying about two m. apart, E.–W., in a small room (top of walls 0·4 m. below surface), 3 m. N.N.W. of olive tree.

No. 17. Empty grave, paved and lined with large clay tiles. Width 0·65 m. Preserved length 1·33 m. Depth 0·53 m. 1 m. below surface, close under olive tree on north-west side. Pl. 24. 6.

No. 18. Clay jug, fragmentary.

No. 19. Empty stone sarcophagus 0·98 m. × 0·4 m., 0·5 m. below surface, 3 m. west of fig-tree. Pl. 23. 3.

No. 20. Slab grave.
(1) Bronze mirror-disk. Diam. 0·176 m.
(2) Pl. 36. 2. Large glass toilet bottle with broad conical body. Bluish glass. H. 0·16 m.
(3) Pl. 34. 5. Glass toilet bottle with slender conical body. Bluish glass. H. 0·08 m.
(4) Pl. 34. 5. Similar, greenish glass. H. 0·092 m.
(5) Pl. 34. 5. Broad toilet bottle, with squat conical body. Bluish-green glass. H. 0·092 m.
(6) Pl. 37. 10. Small gold filigree ring, with green paste gem. Diam. 0·017 m.
(7) Pl. 36. 5. Fragment of bone rod, with lathe-turned decoration. L. 0·12 m. Also fragmentary bone loop.
(8). Pl. 36. 9. Perforated bone button. Diam. 0·025 m.
As can be seen from the photograph, the lower end of the rod was cut and shaped to fit into the button. See also note to 4 (4) and (5).
(9) Pl. 34. 3–4; 35. 1–2. Two glass buttons, (*a*) blue-and-white spiral, opaque, diam. 0·025 m., (*b*) clear, bluish glass, diam. 0·023 m. See note on 22 (15).
(10) Pl. 36. 1. Glass stirring-rod. L. 0·178 m. (for glass buttons and stirring rods see note on 22 (15)).
(11) Fragmentary bronze pin.
(12) Pyramidical clay weight. H. 0·045 m.
(13) Pl. 33, 34. 1. Moulded glass bowl, with tall ring base, and moulded bifurcating handles (one broken off). The bowl is engraved with a design of two sea monsters, one a hippocamp, the other a griffon, each ridden by a cupid standing on its back. Dull, pale green (natural colour) glass. H. 0·045 m., diam. 0·113 m. In National Museum, Athens.

This unique bowl was enclosed in an outer bowl of bronze, a small fragment of which has survived. The bowl is of thick, moulded glass, engraved on the outside. Within the incised outlines, the surface of the glass has been worked in such a way as to produce the appearance of relief, whether seen from the outside or the inside, but it is not actually raised. As the material is transparent, the photographs give a better idea of the design (from the inside, as the user would see it) than can be obtained from a drawing. The glass does not appear to be Syrian. Mr. Harden has drawn my attention to a two-handled bowl from Pompeii, published by G. A. Eisen (*Glass*, I, 290, pl. 62), which is made in one piece, handles and all, like ours. The Pompeii bowl is very simply decorated with a few leaf shapes, apparently in moulded relief. Nothing like the engraved design on our bowl appears to have been found in first century glassware hitherto. Perhaps the technique was abandoned after a short time as too difficult to be worth while. It is strange also that an object the like of which has not been found in Pompeii or elsewhere should turn up on so small an island as Siphnos. A possible explanation is that the owner may have belonged to a family of important exiles from Rome. We are not told of anyone being exiled to Siphnos, but Seriphos, only a dozen miles off, was a known place of banishment in the first century: and Siphnos, to-day, is a more salubrious island than any of its immediate neighbours. A transfer from Seriphos to Siphnos would probably be welcomed by the exile and could hardly affect the imperial court.

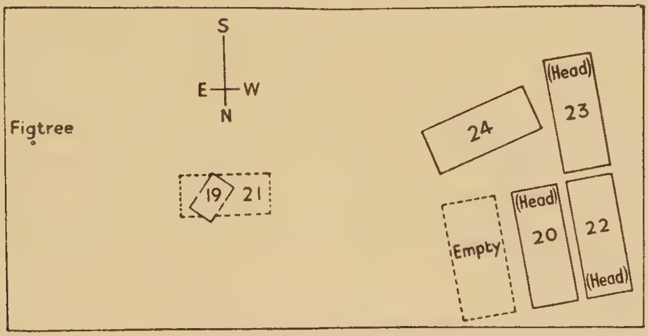

FIG. 26.—THIRD GROUP OF GRAVES, IN "FIG-TREE" TERRACE.

(14) Pl. 34. 2. Fragment of bronze container of the above.
(15) Pl. 34. 5. Toilet bottle with conical body. Bluish glass. H. 0·105 m.
(16) Pl. 34. 5. Similar. Greenish glass. H. 0·10 m.
(17) Pl. 36. 3. Fragments of another similar.
(18) Iron nails.
(19) Marble weight with handle. 0·165 × 0·085 × 0·085.
(20) Pl. 31. 1. Denarius of Vespasian. A.D. 70–71 (*RIC* II, Vesp. no. 30).
Obv. Head of Emperor R. Inscr. L. to R. IMP CAES VESP AUG PM
Rev. Simpulum, sprinkler, jug, lituus, Inscr. AUGUR TRI POT
(21) Pl. 31. 1. Denarius of Titus, A.D. 80 (*RIC* II, Titus no. 26).
Obv. Head of Emperor R. Inscr. R. to L. IMP TITUS CAES VES . . . . . P M.
Rev. Dolphin twined round anchor. Inscr. TR . . . . . IMP XV . . . . P P

No. 21. Below No. 19. No covering slabs.
(1) Fragmentary bronze ring with beads.
(2) Clay toilet bottle (fragmentary). L. 0·135 m.
(3) Clay toilet bottle (fragmentary).
(4) Clay toilet bottle (fragmentary).

No. 22. Slab grave.

(1) Pl. 37. 1. Glass toilet bottle, bluish-green. H. 0·088 m.

(2) Pl. 37. 1. Similar, bluish-green. H. 0·066 m.

(3) Pl. 37. 1. Similar (fragmentary). Bluish-green, large.

(4) Pl. 37. 1. Clay toilet bottle. H. 0·067 m.

(5) Pl. 37. 1. Clay jug. H. 0·133 m.

(6) Iron nails.

(7) Pl. 37. 7. Bronze casket and lid. H. 0·056 m.

(8) Pl. 35. 3. Bronze curb chain (fragmentary) and wire rings for carrying some object, perhaps the preceding. Diam. of rings 0·03–0·04.

Cf. No. 5 (4), Pl. 26.

(9) Pl. 35. 3. Two bronze rings with iron attachments. Diam. of rings 0·025 m.

Cf. No. 5 (21).

(10) Two pieces of gold leaf.

(11) Pl. 37. 6. Glass jug fragment (neck and handle). Bluish green. H. 0·075 m.

(12) Pl. 37. 2 and 5. Fragments of two toilet bottles. Bluish. (*a*) H. of neck 0·065 m.; (*b*) Diam. of neck 0·012–0·015 m.

(13) Pl. 37. 3. Glass bowl (fragment) bluish glass. Diam. 0·05 m. Similar to 5 (2).

(14) Pl. 36. 6. Fragment of bone rod with lathe-turned decoration. L. 0·093 m. (See note on 4 (4) and (5).)

(15) Pl. 35. 1–2. Two perforated glass buttons, (*a*) clear green glass, with two fractures: diam. 0·024 m.; (*b*) blue and white spiral, opaque, diam. 0·02 m.

Harden's conjecture, in *Karanis*, 295, that glass perforated buttons of this type were not articles of dress but knobs on stirring rods is confirmed by the fact that (*a*), a badly broken button, was found with a piece of a glass rod embedded in it, as the photograph shows. The next photograph in the same plate shows the same button (on a smaller scale) after the piece of rod had been pushed out.

No. 23. Slab grave.

(1) Pl. 31. 1. Two gold ear-rings with green paste gems, thin gold sheet pendants, and S-shaped pins.

(2) Three pieces of gold leaf.

(3) Fragment of bronze mirror-disk.

(4) Clay toilet bottle. H. 0·153 m.

(5) Clay toilet bottle, fragmentary.

(6) Iron nails.

(7) Denarius of Vespasian. A.D. 77–78 (*RIC* II, Vesp. no. 104).

Obv. Head of Emperor L. Inscr. R. to L. IMP CAESAR VESPASIANUS AUG.

Rev. Mars standing l., holding spear and trophy; corn ear in ground. Inscr. COS VIII.[94]

(8) Bronze coin.

Obv. Head. R.

Rev. Eagle (?).

No. 24. Slab grave. No bones found.

(1) Glass toilet bottle. Bluish. L. 0·11 m.

(2) Glass toilet. Bluish. H. 0·075 m.

(3) Pl. 37. 4. Large glass bottle or bowl (fragmentary). Bluish. Diam. of base 0·08 m.

(4) Pl. 37. 9. Clay bowl. Red glaze. Diam. 0·074 m. See p. 69.

(5) Pl. 37. 11. Bronze strigil. 0·22 × 0·075 m.

(6) Denarius.

Obv. Head R. Tiberius (?).

Rev. Indecipherable.

G. MACKWORTH YOUNG

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[94] Mr. C. M. Kraay has identified this coin from a description and rubbings, and has kindly confirmed the identification of the other coins.

SHIPS ON GEOMETRIC VASES

(PLATES 38–40)

I. The Evidence

The representations of ships on Geometric vases, especially on Attic funerary vases of the Dipylon class, frequently earn a passing and often misleading mention in articles on ship-construction or on the relation between heroic saga and scenes on monuments of the Geometric period. The authorities most frequently quoted [1] on the Geometric ship are now out-of-date in that they were able to treat only a fraction of the material now available; although there is still much valuable matter to be found in them, especially in the articles of Pernice, Assmann, and Torr. The original publication of many of the documents, especially those discovered in the first (1871) Dipylon dig, was extremely haphazard; some fragments were published twice over in different forms.[2]

I therefore give a list of the Geometric ship-scenes known to me; doubtless other examples will come to light.[3]

Some of these examples are now mislaid, temporarily or permanently, in museum store-rooms; but the drawings of Pernice and Torr, who published a large part of the early material, are usually accurate where they can be checked.

Much work has been done recently on the dating of Geometric pottery, especially by Young, Kahane, and Weinberg;[4] their conclusions vary, however. Young puts all pottery with figure-representations right at the end of the Geometric period, *i.e.*, at the turn of the eighth and seventh centuries. Kahane assigns the Early, Strict, Ripe, and Late Geometric styles to periods of roughly fifty years each between 900 and 700 B.C., and finds figure-representations in his Strict Geometric period, *i.e.*, *ca.* 850–800 B.C. Weinberg inclines to Young's view, without being quite so extreme; there are few scholars who would accept this view in its entirety, placing as it does the great Dipylon amphora, Athens NM 804, at the very end of the eighth century. Kahane's system of dating is the most convincing, although some vases cited by him appear to be assigned to too early a period; [5] in general, it is accepted in this article as a working hypothesis, although it may in some cases be too rigid. Unfortunately he has not yet dealt in much detail with the chronology of the colossal Attic funerary vases from the Dipylon cemetery, on which a large proportion of the extant ship-scenes appear; nor have recent attempts to attribute these vases to particular workshops, on the grounds of decorative details,[6] been entirely successful. Of these vases, those with figure-scenes clearly belong to the eighth century, and probably the earliest of them—craters such as Athens NM 806 (Kahane 477, n. 52, and pl. XXV)—should not be placed too close to the beginning of this century. The great Athens amphora, NM 804, belongs to the second quarter, while many of the craters, like the Hirschfeld crater, Athens NM 990, belong to the last quarter; and it will be seen that the typological sequence of ship-representations suggests that certain fragments (*e.g.*, those of Group IV below) are to be placed later than the companions of the Hirschfeld crater, and therefore right at the end of the Geometric period, at the turn of the eighth and seventh centuries.

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[1] Especially Cartault, *Monuments Grecs*, XI–XIII, 1882–4, 33 ff.; Kroker, *JdI*, I, 1886, 95 ff.; Assmann, *JdI*, I, 1886, 315 ff.; *AA*, 1901, 98; *Denkmäler* 1597; Pernice, *AM*, XVII, 1892, 285 ff.; *JdI*, XV, 1900, 92 f.; Torr, *RA*, XXV, 1894, 14 ff.; Tarn, *JHS*, XXV, 1905, 208 f.; Behn, *Ebert's Reallexicon*, art. "Schiff."

The fullest modern treatment is by Köster, *Das Antike Seewesen*, Berlin 1923, 84 ff.; this is unfortunately damaged by lack of references, especially in the case of the illustrations. Limited aspects of the question are to be found, among recent publications, in Marinatos, *BCH*, LVII, 1933, 218–21; Richter, *Bulletin of the Metropolitan Museum of Art*, 1934, 169 ff.; Chamoux, *RA*, 1945, 55 ff.; Rhys Carpenter, *AJA*, LII, 1948, 1–10. Miltner's article 'Seewesen,' in *RE*, Suppl., V, relies too blindly on Assmann and Köster, and entirely neglects much of the available evidence on Geometric ships; § II contains, however, some useful details of later developments.

[2] As Torr observed, p. 14. Add to his examples that Pernice's No. 21 is actually a part of Pernice's No. 2, following Cartault's error: also the confusion mentioned on p. 102 below, n. 18.

[3] M. Devambez of the Louvre Museum informs me that more fragments from the Dipylon (presumably still from the Rayet hoard) are to be exhibited shortly; one may hope for more ship-fragments. One small new group (here **19**) has now (April 1949) been exhibited. Other fragments have been incorporated in made-up vases, but in some cases in false associations. See n. 18.

[4] R. S. Young, *Hesperia*, Suppl., II, *passim*, esp. pp. 1–6, 68–71, 195–232; P. Kahane, *AJA*, 1940, 464 ff.; S. Weinberg, *Corinth*, VII, i, and *AJA*, 1941, 30 ff. Weinberg deals particularly with Corinthian Geometric and 'Protocorinthian Geometric.'

The list of ship-representations given below is arranged in an attempt at chronological order, except that Groups IV, V, and VI may have borne a different relation to each other, or have been roughly contemporary. Where there has been sufficient evidence provided by vase-shape, fabric, and style of ornament, it has been used to fit the example in question into its appropriate place in Kahane's general scheme; but dating inside the Dipylon period has often been impossible by these criteria alone, for many of the ship-fragments are so small as to offer little indication of the shape and decorative scheme of the vase from which they come. It is not impossible, however, to date these fragments, or at least to arrange them in sequence, from the evidence of the ship-type which they portray: for a definite typological sequence—whether of actual ship-construction or merely of artistic convention will be discussed below, pp. 123 f.—can be deduced from examples which can be roughly dated by the criteria of shape, fabric, and ornament alone. This typological sequence has been determined first by these other criteria of date; once an idea has been gained in this way of the sort of ship-representation one may expect to find in a certain period, it is possible to begin to assign doubtful fragments to a period on the ground of the representation alone. This is not, of course, an infallible process: thus 35*a–b* below would be assigned, judging by the type of ship they depict, to the Strict Geometric period, because ships of this type have hitherto only occurred on vases (those of Group I) datable to this period on other grounds. Fortunately, however, a type of filling-decoration occurs—the line of dots in (*a*) and dot-encircled swastika in (*b*)—which is only freely employed in the Late Geometric period (doubtless, too, the fabric and paint are typical of the later Dipylon ware [7]). Thus one is forced to conclude that some Late Geometric ship-painters employed an archaising style; if the filling-decoration had not been present, however, one might well have concluded that the fragment was an early one.

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[5] *E.g.*, the oinochoe, Athens NM 194, his pl. XXIII, 2, is assigned to the transitional Strict-Ripe period, *i.e.*, *ca.* 800; but if the figure-style recalls that of **3** below, vase-shape and the dot-edged snake decoration are more compatible with Late Geometric style.

[6] By G. Nottbohm in *JdI*, 1943, 1 ff. She attributes a number of vases (among which is the bowl in the Brit. Mus., **40** in the list below, which must surely be later) to 'the Master of the great Dipylon amphora' (Athens NM 804), to whom she assigns the exclusive use of the so-called oval ornament as a filling-decoration. F. Chamoux, *loc. cit.*, pp. 55 ff., substitutes workshops for individual painters, but follows Nottbohm in choosing particular criteria, especially isolated details of ornament, for the grouping of vases, to the neglect of all others.

Two subsidiary lists are appended to the list of Geometric ship-representations: the first, of ships on Late Bronze Age ware, and the second, of the most important seventh-century examples. The Geometric warship [8] was the direct descendant of the Mycenaean type,[9] and the seventh-century ships retained many of the same structural characteristics; neither, therefore, can be ignored.

(The general discussion of Geometric ships is resumed in § II on p. 123, to which the casual reader may prefer to turn, using the lists purely for reference.)

Geometric Ship-Representations (*List A*)

Group I.

Strict Geometric period, second half (probably) of ninth century. The ships of this period show a marked similarity to the Pylos ship (list B, iii), of some three centuries earlier; they have a high, regularly curved stern; a low, straight hull; a thin ram which is clearly a simple prolongation of one of the main longitudinal beams, perhaps the keel; and a raised ' deck ' [10] carried on vertical struts. Nos. 1 and 2 are very plain ' portraits ' of ships, with no figures; no. 3 shows figures in violent movement, and should probably be placed at the end of this period.

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[7] This is the case with (*b*): I did not see (*a*).

[8] All the Geometric examples are clearly warships. Undoubtedly long-distance merchant-vessels, broader in the beam and with high curved stem and stern, were built in the Geometric, as in other, periods; but Geometric artists just did not depict them: see below, pp. 135 f. It is to be noted that the usual Homeric ship is not a true warship, although it is distinguished from the ' broad merchantman.'

[9] On the type of Mycenaean ships, see S. Marinatos' valuable article ' La Marine Créto-Mycénienne ' in *BCH*, LVII, 1933, 170 ff.

[10] The question of whether this horizontal line above the gunwale actually represents the deck or something else is discussed below, pp. 127 ff. Similarly other terms in this list, such as ' horns ' to describe the typical appendages to stem and stern, and ' eye ' to describe the relieved, decorated circle on the bow of many examples, are used without prejudice for certain characteristics of the painted representation; their actual interpretation will be discussed in the next section.

1. Cup 'from Attica,' exact provenience and present location unknown to me; it was disposed of by an Athens dealer. Third quarter of ninth century. Kahane, *AJA*, 1940, 470 and pl. XXI, 6. Here Fig. 1. The cup has two panels, between the handles; each contains a simple silhouette of a ship with very low hull, high curved stern, two steering-oars, and stern platform with horizontal rails. There is a high step at the stem, probably representing a fore-platform, from which a very large horn curves forward and then aft. Thirteen thick vertical struts support a deck, above which they protrude. No figures or rowing-oars, no mast.

2. Hydriske 'from Attica,' from the same grave-group as **1**. Kahane, *op. cit.*, p. 472 and pl. XXII, 1. Two ships stern to stern, separated by a fish, surround the shoulder of the vase; K.'s photograph shows the right-facing ship and the stern of the left-facing one; they appear to be of the same type, similar to **1**, except that there is only one steering-oar; the fore- and after-platforms are latticed; there is a mast with yard hoisted to its very top, forming a T. Braces run from the ends of the yard to the fore- and after-platforms, and two other lines run inwards from the yard-ends towards the foot of the mast; K. explains as 'Schiffe mit geblähten Segeln,' in which case the sail could not be of the oblong kind common in later Geometric representations; but these two lines might be interpreted as additional braces—again unusual.

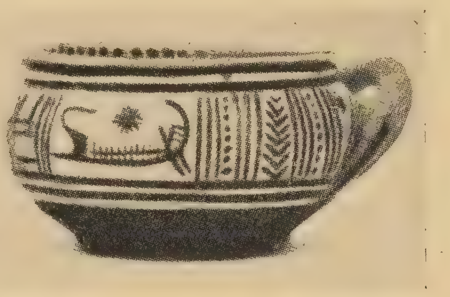

Fig. 1.—Cup from Attica (1).

3. Skyphos from Eleusis; Eleusis 741. *EA*, 1898, 110 and pl. 5 (Skias), Köster, pl. 30; photograph in Kourouniotis, *Guide to Eleusis Museum*, fig. 48; Poulsen, *Dipylongräber*, pp. 100 ff.; Kahane, p. 472, dates as contemporary with **1** and **2**; Schweitzer, *AM*, XLIII, 1918, 105, suggests Proto- or Early Geometric; Young, *Hesperia*, Suppl., II, 202, n. 2, dates at the end of the eighth century: a range of two centuries! However, vase-shape, context (the skyphos was found in a grave slightly deeper than the Isis grave; see Skias' original publication, *loc. cit.*), and type of ship-representation, all support a date near

the end of the Strict Geometric period. A ship similar in general build to the preceding examples, with thin ram and high curving stern: the deck appears to be supported on a large number of small oblique struts between hull and deck, but these may represent thwarts; for above the deck-line protrude five thick vertical lines which are probably the real supports. A latticed bulwark at the stem and stern indicates the presence of platforms; the steering-oar is grasped by a steersman, while a warrior with bow advances above the deck, amidships; at each end of the ship, on land, is a fully armed warrior of the opposing side; on the forward horn a bird sits.[11] This is the earliest example of the land–sea fight on a Geometric vase, if the two warriors outside the ship are not merely heraldic; *cf.* two 'disconnected' warriors in **5**. On the other panel is a scene of land fighting.

GROUP II.

Early Dipylon ship-style; Ripe Geometric period, first half of the eighth century, probably late in this period. The three ships of this group, although very different from each other, all retain certain features of the Group I ship, or show them in a transitional stage towards their counterparts in ships of the developed Dipylon ship-style: for example, the stern in this group is midway between the high, regularly curved type of the earlier period and the blunter, lower stern of the succeeding period. The thicker, curved hull and the substantial ram, shaped to join the stem-piece in a regular curve, are seen for the first time. **5** recalls the old 'portrait' technique, nor do the static rowers detract from this impression; the other two ships are the centre of spirited action. All three are from large Dipylon craters.

4. Part of a crater from the Dipylon cemetery; Königsberg A 18. *Annali*, 1872, 152 = *Mon. Ined.*, IX, pl. XL, 3; no. 1 in Pernice's list, *AM*, 1892, 285; fullest publication with photograph by R. Lullies, *Antike Kleinkunst in Königsberg*, p. 11 and pl. 2 (no. 7); the description of the two corpses amidships as 'rowers' is quite arbitrary. Here Fig. 2. Lullies describes as Ripe Geometric, while G. Nottbohm notes similarities in decoration to Athens NM 804.[12] A ship facing left, with thin hull rising to a high two-stepped fore-platform. The forward horn slopes aft and has a slight S-curve, which is to become more pronounced in the next period. The stern is fairly high, but appears to be cut off abruptly, without horn; perhaps the surface of the sherd is damaged here. The ram is of medium thickness; just aft of it is a small eye in the form of a relieved circle filled by a cross. Between the steps in the hull forward and aft runs a thin horizontal line just above the hull-line, possibly representing not a deck but the far-side gunwale.[13] Two warriors sit forward of the mast, holding two severed ropes, probably the forestays; the mast is collapsing forward, which would happen if the backstay, not the forestays, were cut; the exact situation represented is puzzling. Near the stern is a small figure which may be the steersman, although he is well out of reach of the steering-oars.

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[11] So *e.g.*, in **6**, **14**, **15**; and in many of the ship-representations on seventh-century fibulae. The birds are probably sea-gulls, if anything specific, although two separate types can be distinguished. Birds of prey, too, occur in Geometric art: see Lorimer, *BSA*, XLII (1947), 137.

[12] Nottbohm dates the activities of the painter of Athens 804, 'the master of the great Dipylon amphora,' to *ca.* 760–740. The earlier date may be correct.

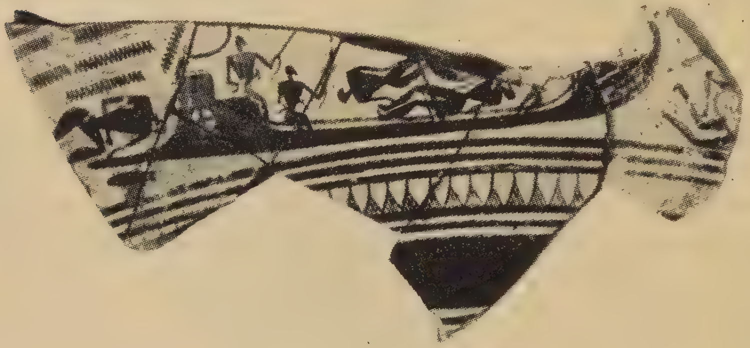

Fig. 2.—Fragment of Crater in Königsberg (4).

5. Fragment of a crater from the Dipylon; Louvre, A 525, Giraudon 33854. Cartault, *Mon. grecs*, XI, 44, fig. 1; Pottier, *Vases Antiques du Louvre*, p. 23. Pernice, *loc. cit.*, strangely describes as a further fragment of 4. The oblong panel below the double handle is filled by a long vessel facing right, with a slightly curved hull of medium height. The forward horn completes more than half the circumference of a circle; the stern-piece is high and very thick, and tails off into a long, thin after-horn. A thin horizontal line runs just above the gunwale as in 4, with no supports; above it appear the upper parts of the bodies of thirteen rowers (the blade of the thirteenth, stroke, oar is not shown; there is no steering-oar). They appear to face the spectator, and clasp each other's hands, at the same time holding their oars vertically downwards. This strange position has been explained

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[13] Only in this case, and conceivably in 5, the positions of the figures are compatible with Pernice's theory that the apparent deck is really the far gunwale; see pp.127–9.

by Cartault, *loc. cit.*, p. 45, as a stopping or turning manoeuvre, and by Assmann (*JdI*, 1886, 315) as a form of ceremonial greeting. It is rather, however, a singularly naïve attempt simply to portray rowers in action, a new theme which might puzzle even an artist used to drawing chariots and armed warriors. Above the ship in the arches formed by the handles, filling the empty space, are poised two armed warriors on a much larger scale.

6. Crater from the Dipylon; New York. G. M. A. Richter, *Bull. Metr. Mus.*, 1934, 169 and figs. 1–3; Miss Richter assigns this crater to the early eighth century. The main zone of decoration is filled by two similar ships facing right, separated by lines of marching warriors; fighting is taking place on the ships, which are evidently regarded as being beached, although one has a sail hoisted. The ships are long and slender, with thin rams (that on the left-hand ship has perhaps been wrongly restored); the eye is square and filled by a Union Jack pattern. The forward horn resembles that of **5**, while the after one is nothing more than a short continuation of the stern-piece; it is branched, however, *i.e.*, it has two small projections on its upper side. One steering-oar is visible in each ship. Between the fore- and after-platforms run two horizontal lines which, together with the rail of the after-platform, project beyond the stern; one must be a longitudinal beam, the other a deck. They are supported on closely set vertical struts. The right-hand ship has a mast and narrow oblong sail; the other could have had a mast, but there is no room in the missing section of it for a sail. Four long ship-spears, ναύμαχα ξυστά, stand erect by the fore-platform. The fighting on deck (the warriors' feet rest on the upper horizontal line) is animated, and the figures do not yet have the stiffness of the Late Geometric period.

Group III.

Developed or Conventional Dipylon ship-style: Late Geometric period (second half of eighth century). From this period come a large majority of the extant Geometric ship-paintings, which, together with prothesis- and ekphora-scenes and scenes of land-fighting, provide the subjects of figure-decoration on the later funerary vases. The ships are represented in a highly stylised manner, and although many different minor conventions betray themselves, especially in the treatment of perspective, there is a certain uniformity of build: the ships are shorter and more solid than those of Groups I and II, with thicker, more curved hulls, stepped and latticed platforms, conspicuous eyes, and elaborate horns fore and aft. The rowers are often shown at their oars, and when there are no rowers a mast and sail are usually shown. The use of slightly different conventions in the depictment of details, *e.g.*, whether rowers are shown, and if so in what position in the ship they are seated, allows a subdivision within this group into smaller groups; these sub-groups may represent the particular styles if not of individual painters [14] at least of separate workshops.

A. *Ships with thole-pins ; figures standing on ship's floor, apparently* through *deck.*

7a. Fragment of a crater from the Dipylon; Louvre A 527, Giraudon 29661. Torr, fig. 10 (drawing); Köster, pl. 21; Chamoux, fig. 9; here Pl. 38. 1. The fore-part of a ship facing left: on the ram stands a warrior, behind whom are five corpses disposed vertically; [15] in the ship the legs of two figures remain, apparently penetrating the deck and resting on the hull; or more exactly on the thin edging-line which surrounds the space between hull and deck in many pictures of this group, its purpose probably being purely ornamental. There is a double-stepped fore-platform with lattice rail, an eye filled with a sixteen-point star, four short projections on the stem, and a typical Dipylon horn fitted to the top edge of the fore-platform and filled with cross-hatching. The deck-line is thin and is crossed by regular vertical struts, between which appear short vertical lines with hooked apices, probably representing thole-pins for the oars; the hooked top would prevent the leather grommet from slipping off the pin on the backward pull. This fragment has now been incorporated in a built-up half of a crater; it and *7b* fill the upper panel, between the handles; the central frieze has three chariots, and figures; the lower frieze contains another ship, **14** and **17***a*, on which false connexion see n. 18 below.

7b. A smaller fragment from the same crater; Louvre A 535, Giraudon 33862. Torr, fig. 9. This fragment shows a small midships section congruous in all respects with *7a*; remains of three warriors, one of whom has his feet midway between hull and deck. The feet of the second certainly, and of the third probably, rest on the hull. The fragment has been plausibly mounted as forming part of the same ship as *7a*, although there is no direct join.

8. Fragment from the Dipylon; Louvre A 534, Giraudon 33862. Torr, fig. 8 (= Köster, pl. 22). The fore-part of a ship facing left, from the fore-platform aft. The fore-platform is double-stepped, its lattice rail having only one instead of the usual three vertical supports; the round eye has a Union Jack filling; part of the horn remains, although omitted in Torr's rather

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[14] The attribution of vases to separate painters is dangerous (especially where, as in most of these ship-scenes, only small fragments remain), first because on the same vase the figure-scenes and the purely Geometric ornamentation, including filling-ornament, may have been executed by different artists, specialists in each work, although there is no evidence for such specialisation at this date; and secondly because in the eighth century at any rate the manner of representing ships was changing so rapidly that a single painter might well have modified his technique from vase to vase.

[15] For a remarkably similar pile of dead see another crater fragment, Louvre no. A 519; (Hampe, *Frühe griechische Sagenbilder*, fig. 22; Nottbohm, *loc. cit.*, fig. 2). Chamoux plausibly assigns the two fragments to a common workshop.

inaccurate drawing. Thin deck-line, edging-lines, struts, and thole-pins are the same as in *7a–b*; five warriors stand on the hull, of whom the left-hand one is almost erased, and the central one holds a square shield and five spears. This fragment is almost certainly by the same hand as the two above.

B. *Ships with thole-pins, figures with feet* on *deck.*

9. Fragment from the Dipylon; Louvre A 528, Giraudon 29658. Cartault,[16] fig. 2; Chamoux, 82–4 and fig. 7 (photograph). The fore-part of a ship, with usual fore-platform and horn; thole-pins and struts as in sub-group A, but the deck-section is much thicker. Two warriors from the ship are repelling a helmeted enemy who stands on the fore-platform; the right-hand warrior has his feet on the deck, but the central figure is somewhat below the deck-level, his feet being invisible. He is in the act of mounting to the platform.[17] The eye is unusually intricate, being a reserved circle in which is another circle filled with an eight-point star and surrounded by dots.

10. Fragment from the Dipylon; Louvre A 537, Giraudon 33857. Torr, fig. 12; Chamoux, fig. 4 (photograph). The upper part of the stern of a ship facing left, with three warriors and above (*i.e.*, behind) the stern the head and shoulders of a horizontal corpse; part of the thick deck appears, with protruding struts, also the branched after horn, three ship-spears, and a lattice railing. The underside of the deck is missing so that no thole-pins are visible, but they were probably present; for between the two left-hand figures is a dot-surrounded circle filled with an eight-point star, similar to the eye of **9**—an extremely rare Geometric ornament; also the long-legged figures closely resemble those of **9**: finally an examination of these two fragments side by side has convinced me that they are stern and bow of the same ship-painting. Fabric and paint are identical. A third fragment, S 505 (top left in Chamoux' photograph), appears to be from the same vase, and the heads of two helmeted archers in the lower zone may well belong to figures standing on the missing central portion of the deck.

11. Fragment from the Dipylon; National Museum, Athens. Pernice, *AM*, 1892, 287, no. 23, and fig. 7. The bow of a ship facing left; the ram is missing. Behind the fore-platform and cross-hatched horn are three ship-spears. The large eye is filled with a sixteen-point star. There are four horizontal protrusions on the stem, evidently prolongations of the beams supporting platform and deck, also two similar protrusions on the after-side of the lower step. Enough of the deck remains to show that it was of the thick type, which is associated with this sub-group: sub-group A has the thin deck. Two vertical deck-struts and one thole-pin remain, but no figures.

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[16] As Torr, p. 14, points out, Cartault did not realise that this piece includes the smaller fragment already published separately in *Annali* (1872), pl. I, 4; Pernice lists only this smaller fragment (his no. 3).

[17] See p. 129 below.

12. Fragment from the Dipylon; National Museum, Athens. Not published previously, unless as one of five mentioned by Pernice, p. 286, n. 1, as coming ‘ nur statistisch in Betracht.’ The fragment shows part of a deck; a small part of the hull and, at the right-hand extremity, the beginning of the fore- or after-step are visible. The deck is thick; four struts and three thole-pins remain, and thin edging-lines over and under the deck and over the hull are also typical of this sub-group. The thole-pins are somewhat unusual in having no clear hooks, and in resting not on the hull itself but on its edging-line. Two pairs of legs stand on the deck in positions which suggest that their owners were engaged in violent combat. The fabric is thick and the paint dark brown, some of the thinner lines being almost black.

13. Fragment of closed vase from the Dipylon; Louvre, no number. Not previously published: here Pl. 39. 1. Part of the bow of a ship facing left; the ram, stem, and most of the fore-platform are missing. The eye is filled with an eight-point star; thick deck, struts, and thole-pins all have the form typical of this sub-group. A single leg rests on the deck; under the bow is a corpse. The fabric is thick, and the paint is black except for the struts, thole-pins, and the star in the eye, which are brown, suggesting that the broad lines of the hull and deck were painted first and the details added afterwards with a finer brush.

C. *Ships with mast and sail; no thole-pins, no figures except steersman.*

14. Two groups of fragments from the Dipylon: here Pl. 40. 1. The left-hand group (ship's bow and two small pieces from the upper zone) is in the Louvre, A 526, Giraudon 29660 and 33854; the right-hand group (midships and stern part), composed of five fragments, is in Athens, Nat. Mus. In all probability these two groups form bow and stern of the same ship, or conceivably from different ships in the same zone; in Pl. 40. 1 a composite photograph is shown. The groups do not join, as was once thought;[18] for this would make the part of the sail forward of the mast much shorter than the after part—which is un-Geometric. A small section of the sail, deck, and hull must still be missing, as shown in the figure: there are, however, small discrepancies between the two groups[19] which make a comparison of all the material side by side highly desirable, to establish whether fabric and paint are really the same.

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[18] The main Louvre fragment and the largest of the Athens fragments, showing the mast and most of the sail, were found separately in 1872 and 1871 respectively and published by Hirschfeld in *AdI*, XLIV, 152; from his account it appears that the two fragments were not seen side by side, although this is not made clear. At any rate separate sketches were made and were combined to show a join in *Mon. Ined.*, IX, pl. xl, 4—a misleading picture which has been widely reproduced (*e.g.*, by Behn in *Ebert's Reallexicon*, *s.v.* ‘Schiff’). The sail was made to terminate, in the sketch, at the right-hand end of the left-hand Athens fragment; thus there seemed to be no inequality between the sail-length before and after the mast, and a join seemed possible. Soon after discovery the bow-fragment was removed to Paris, evidently by M. Rayet, where the two other small pieces were joined; and the other mast-and-sail fragment fell into oblivion and was eventually declared lost. Meanwhile Cartault took the opportunity of republishing the Paris fragment, extremely inaccurately; Pernice took the republished form to be a new discovery and listed the part and the whole as his nos. 21 and 2. In Athens, a join was made at some time between the mast-and-sail fragment and three others showing the ship's stern, which had been separately published by Pernice as his no. 19, *loc. cit.*, fig. 2. This important join (which would have revealed the inaccuracy of the drawing *Mon. Ined.*, IX, pl. xl, 4) was never published, nor was a connexion between the two groups re-observed until recently;

The complex shows the greater part of a ship facing left; before the bow stand two fully armed warriors, another stands abaft the stern. The general build of the ship is characteristic of the conventional style, with a double step forward, an eye filled with an eight-point star, a long forward horn sloping right back towards the sail-edge, and a graceful ram which continues the curves of stem-piece and the bottom hull-line. The deck is thick, and is supported on the usual vertical struts; the edging-lines, however, are thicker than in the previous sub-group, and there are no thole-pins. Near the stern platform with its lattice rail stands the steersman. The after-horn has three branches; against it is a group of three ship-spears. A single large steering-oar is visible, but a piece is missing here, and there may have been a second one, too. Amidships is a mast whose foot meets the hull and whose top terminates in a bisected V, probably a lead for the two halyards used for hoisting the yard. The long rectangular sail, suspended from a single upper yard, is divided into small squares by horizontal and vertical lines. Braces from the corners of the yard and sheets from the lower corners of the sail[20] lead to the platforms fore and aft; on the lower step forward are two short vertical lines which may represent belaying-pins. The steersman is holding the edge of the sail with his right hand. Two large birds, of different species, hover by the stem and stern. The unrealistic tendencies of the conventional Dipylon ship-style are well demonstrated in this painting, where the sail and steersman suggest that the ship is at sea, and the warriors on land at its two extremities imply that it is firmly beached.

Mme Karouzou tells me that Dr. E. Kunze also commented on it before the late war. The whole story is typical of the muddle caused by the immediate dispersal of the original Dipylon finds.

The story has recently been complicated by the mounting of the Louvre group of fragments as the bow of a ship of which 17*a* is the stern. The gap between bow and stern is in any case too small for a typical sail: but the connexion is impossible, for while there are only six vertical divisions of the sail in 14, there are at least seven and probably eight in the sail in 17*a*. The horizontal lines of the sail were clearly drawn by the artist continuously, in a single stroke: it is impossible that the number of divisions in the same sail should suddenly change. This seems to be a decisive argument against this latest conjecture.

[19] In the Louvre fragment the two deck-struts do not project above the top edging-line, while in the Athens fragments they do: but in **16** also, according to Pernice's drawing, the projections are irregular in the same ship. (The faulty connexion with 17*a* does not do away with this apparent discrepancy.) The helmet-plumes of the warriors at stern and bow are different; also the under-deck edging-line in the left-hand Athens fragment seems to be of a lighter paint. But the two members of the composite photograph are only juxtaposed for illustrative purposes, and should not be used as an exact criterion.

[20] There is a further vertical line from the lower edge of the sail, between the mast and the right-hand corner, which together with the faulty drawing in *Mon. Ined.*, IX, led Assmann, *JdI*, 1886, 315, to suppose that this was the sheet, and that the sail had a lower boom; and that since lower booms are seen only on Egyptian ships the Dipylon type of ship was Egyptian in origin. Part of this misleading theory is reproduced by Pernice.

15. Fragment from the Dipylon; Athens, National Museum, not at present available for study. Pernice, *AM*, 1892, 285 ff. and fig. 1; Köster, pl. 25. The fore half of a ship extremely similar to **14** above, except that there are four ship-spears on the fore-platform. There are four protrusions from the stem, and the platform is lower, apparently without railing; mast, sail, and halyards are the same as above, except that there is no bisected-V mast-top. A bird similar to the left-hand one in **14** is shown above the ram; no figures appear.

16. Fragment from the Dipylon; Athens, National Museum (not available). Pernice, fig. 3. This fragment shows part of the stern of a ship similar to **14**, with steersman holding the after edge of the sail, latticed platform and branched horn above which appears the neck of a large bird. I consider that this is the stern of the ship of which **15** is the bow; this is possible from Pernice's drawings, but cannot be confirmed until the actual fragments are found and can be compared. The similarities in every respect between the details of the ships, the attitude of the steersman, and the birds, make it virtually certain that all three representations are by the same hand; **14** and **15–16** cannot, however, be from the same vase, as the inter-zonal bands are different (wolf's teeth between horizontal lines in **14**, blobs between horizontal lines in **15**).

17*a*. Fragment from the Dipylon; Louvre A 538, Giraudon 33860; Torr, p. 16, fig. 2. Here Pl. 39. 6. The stern of a ship facing left; somewhat below the level of the thick deck stands a figure armed with a sword; probably the steersman, for with one hand he holds the edge of the sail, of which the brace and sheet are visible. The under-side of the ship curves up sharply to the stern, below which is a single horizontal protrusion and part of the blade of a large steering-oar.

17*b*. Fragment from the Dipylon; Louvre A 540, Giraudon 33860; Torr, fig. 13. Here Pl. 39. 9. Part of a ship's stern, with after railing and, under the sharply-curving hull, a single horizontal protrusion and part of the blade of a steering-oar. This fragment used to be wrongly joined to **17***a*, for which it is too large: it is wrongly so joined in Pl. 39.

17*c*. Fragment from the Dipylon; Louvre A 539, Giraudon 33860. Torr, fig. 1. Here Pl. 39. 5. A small part of the hull, deck, and sail from the midships section of a ship apparently similar to others of this group; very fragmentary.

D. *Ships with no sail, rowers rowing from the deck.*

18. Crater from the Dipylon; Louvre A 517, Giraudon 29657. Cartault, *Mon. grecs*, XI, pl. 4, 1; Köster, pl. 18; Nottbohm, fig. 5 (photograph).

Here Pl. 38. 2. In the panel under one handle is a ship facing left, almost complete: platforms with lattice railings fore and aft, conventional horns, eye filled with sixteen-point star, four protrusions from the stem. The deck is of medium thickness and is supported by the usual struts; on it sit four rowers pulling at their oars. The ship is short for its height, and is obviously drawn to fill the restricted and irregular handle-panel, for which *cf.* **5**—see p. 99. There are no rowers amidships, for the centre part of the double handle intrudes, but two extra oars without rowers are shown here, and another two right forward. It is to be noted that this is a scene of peaceful navigation, rare in this group.

19. Three small fragments in the Louvre, previously unpublished, have recently been displayed as part of a built-up prothesis-crater. They have been placed under the handle, but this position appears conjectural. The left-hand one shows just the ram of a ship: the other two together show a small midships section with hull, deck, edging-lines and struts. This might have been a ship similar to **18** which also occurs under the handle of a prothesis-crater; but there are no signs of rowers in this one, although there would be no rower under the central pendent of the handle.

20*a–b*. Sherds from the Acropolis, Athens; in Athens, National Museum. Not previously published. *b* is of a thinner fabric than *a*, but both are from large open vases. *a* shows part of the midships section of a rowed ship: above the straight hull are rather thick vertical struts for the deck, a small part of which remains, not enough, however, to determine its thickness. Below the hull are three elongated triangular oar-blades; the oar-looms cross the rectangular spaces between the deck-struts, but they are carelessly drawn, for they would not meet the blades. The rowers must have been shown on deck. *b* shows only the bottom of a ship's hull, with three oar-blades similar to those in *a*; under them, in both cases, is a fish. The style of drawing is not typical of this group; there are no edging lines over the hull and under the deck in *a*, and the struts are thicker than usual. In some ways the drawing is similar to that of **40**, where, however, the rowers' feet, as well as the oar-looms, are seen between the struts. The assignment to this group and sub-group is only tentative.

E. *Ships with rowers under deck, sitting on the hull.*

21. Fragment of a crater from the Dipylon; Louvre A 531, Giraudon 29663. Cartault, *loc. cit.*, p. 51, fig. 3; Köster, pl. 24; Chamoux, p. 72 and fig. 8 (photograph, showing another small fragment which has been joined to the left-hand edge). The after half of a ship facing left: no after-platform is shown, nor any deck-struts. The horn bends forward almost parallel with the deck; it has four stunted branches, and under it is a tiny figure of a steersman. Two handles of steering-oars appear, surmounted by right-angle cross-pieces, but only one blade remains. Under the stern is a crouching man transfixed by a spear, and just above the deck (Chamoux correctly explains, ' en réalité derrière le navire ') three large recumbent corpses. In the space between deck and hull, which is made purposely large, eight oarsmen are pulling at oars with spade-shaped blades. By omitting the vertical struts the artist has been enabled to portray the rowers clearly.

22. Fragment from the Dipylon; Louvre A 533, Giraudon 33860. Torr, 18, fig. 6; Köster, pl. 23. Here Pl. 39. 7. Part of the fore-part of a ship facing left, ram and fore-platform missing. No struts are shown for the deck, under which two rowers are sitting on the hull pulling at their oars; part of the loom of another oar is shown below the hull, forward of the foremost rower—presumably by mistake. On the deck two warriors, one standing and the other sitting, are each holding a severed rope, probably forestays, while to their right are the feet of a corpse. The situation portrayed appears to be similar to that in 4. The presence of the rowers suggests that the fight is going on at sea, or while the ship is putting to sea, but no consistency was usually observed on this point.

23. Fragment from the Dipylon; Louvre A 536, Giraudon 33860; Torr, fig. 5; here Pl. 39. 8. Another small piece, showing two more oars, has since been joined to the right-hand edge. Part of the fore-end of a ship facing left: two rowers are sitting on a line above the hull similar to that in **22**, but even thicker; it might conceivably be a deck, but this is not probable. Forward of the left-hand rower the hull is stepped up at an obtuse angle; all lines in this fragment, as in the previous one, are straight. The similarity of style is in favour of a common origin. Below the hull is a line of crudely painted fishes; the rowers' heads, and the deck under which they probably were, are missing.

24. Fragment from the Dipylon; Athens, National Museum (inaccessible). Pernice, 292, fig. 4. Part of the fore-part of a ship facing left: the foremost two rowers are shown sitting on the hull; above them is a deck-line of medium thickness. In Pernice's drawing (which cannot be checked at present) the hull appears to stop short before the left-hand edge of the fragment, giving the impression of a ram-less ' canoe ' bow. This is highly improbable, and the drawing is to be mistrusted.

F. *Other ships of the conventional Dipylon style, not attributable for certain to any of the sub-groups above.*

25. Crater fragment from the Dipylon; Louvre S 528, Giraudon 33860(2); here Pl. 39. 4. Not previously published. The upper part of the stern of a ship facing left: the top of the deck-line is shown, above it an edging-line and the tops of three vertical struts. A steersman stands somewhat below deck-level, grasping his sword-hilt with one hand and one of the two T-topped steering-oar handles with the other. A horn with four stunted branches runs horizontally forward and curves upwards just above his head; in front of him are the extremities of two horizontal corpses. The unusual shape of the horn corresponds exactly with that in **21**, as do the handles of the steering-oars, but the presence of vertical struts suggests that there were no rowers below the deck. The paint is red, and there are slight traces of sheen on the back; in **21** the paint is black, but J. M. Cook has pointed out to me that the glaze frequently varies from red to black on the same vase.

26. Fragment from the Dipylon; Louvre, not numbered; here Pl. 39. 2 (first published photograph). Torr, 23 and fig. 11. The stern of one ship and stem of another, both facing left; they are apparently engaged in battle at sea. The ram of the right-hand vessel is nearly touching the stern of the other; in the water are corpses. The hull of the left-hand ship curves up steeply to the stern, which resembles that of **17***b*, to the sub-group of which (III *C*) the fragment probably belongs; its two steering-oars have broad oblong blades shown in the conventional manner by three parallel lines. The ram of the other ship is long and gracefully curved; the eye has an inner circle of dots and may have resembled the eye of **9**. The drawing on this fragment is extremely careful, and all the details which remain are characteristic of the conventional style. It is important as being the only Geometric document which shows, for certain, a sea-battle as opposed to a land–sea engagement. The left-hand ship could, of course, be beached, but this is not probable.

27. Fragment from the Dipylon; Athens, National Museum (inaccessible). Pernice, fig. 8. Part of the bow of a ship facing left: apparently standing on the ram is a warrior. There are no less than five protrusions from the stem; the base of the horn is filled with vertical hatching, and below it, along the edge of the platform, runs a line of meander. This extra adornment is unique in these representations, as is the white paint which Pernice (p. 287, his no. 24) noted on the meander.[21] The eye is filled with an eight-point star.

Group IV.

Refinements of the Conventional ship-style, showing apparent biremes and cataphract [22] ships. Late Geometric period, second half of the eighth century: sub-group B and C are probably at the end of this period, since the strict silhouette technique is being abandoned. All examples come from colossal Attic vases.

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[21] The earliest recorded use of white paint in Attica for figure-painting is on the Benaki amphora of the end of the eighth century: see J. M. Cook in *BSA*, XXXV, 168; but it is used as simple enhancement of ornament perhaps as early as the middle of the century; it is not uncommon on Cretan and Corinthian Geometric, *cf.* Payne, *Perachora*, I, 54.

[22] 'Cataphract' is taken as implying the broadening of the deck-struts to provide lateral protection for the rowers. See below pp. 129 and 137.

A. *Apparent biremes still having some characteristics of the Conventional style.*

28. Part of a crater from the Dipylon; Louvre A 530, 529, 521; Giraudon 33855 and 29662 (stern only). The fragment showing a ship's stern was published by Cartault, *loc. cit.*, pl. 4. 3; so Torr, *Ancient Ships*, pl. 3. 14 and Köster, pl. 26. Other joins have now been made; the centre part of the ship is still missing, but the ram has come to light; see Chamoux, fig. 6. The general outline of the ship is closely similar to that of **21**. As in **21** there is no after-platform, and the small steersman, standing a little below deck level, holds one hand in the air and with the other grasps the handle of one steering-oar; in this case, though, the handle has no cross-piece. The other handle is missing, as is the horn. Under the deck (which has no struts), sitting on the hull, two rowers and part of a third are seen; above them, sitting on deck in front of the steersman, one more rower and part of another. In spite of the important difference that this fragment shows two banks of rowers, and **21** only one, the other similarities are strong enough to suggest that they are by the same painter: the artist is here attempting to depict the far-side rowers, an attempt which he did not make in **21**, where the space over the deck is conveniently filled by corpses. As in **14**, the warriors standing on land near stem and stern are inconsistent with the main impression that the ship is at sea.

29. Fragment from the Dipylon; Louvre A 532; Giraudon 33860. Cartault, *loc. cit.*, pl. 4. 2; Köster, pl. 27; here Pl. 39. 3. A small section near the stern of a ship facing left. On the edging-line above the thick hull sit three rowers; above them on deck, two more. The deck is thin, unlike that in the preceding fragment, while the oar-blades are triangular and not spade-shaped.

30. Fragment from the Dipylon; Louvre, no number. Torr, 18 and fig. 7. The midships part of a ship facing left; the upper portion of the deck is missing. Below the deck, which has no struts, five rowers are sitting at their oars, which have spade-shaped blades, on a narrow line just above the hull. The drawing of the figures, hull, and thick edging-lines suggest that the fragment is by the same artist as **29**—probably from the same vase and perhaps part of the same ship; although a narrowing of the rowing-space suggests that the section here is also near the stern.

B. *Cataphract apparent biremes.*

The thick fabric of these two fragments and those of the following sub-group shows that they too are from colossal vases; but their coarse paint and technique distinguishes them from the fragments of grave-vases found in the Dipylon area.

31. Sherd from the Acropolis, Athens; in Athens, National Museum. Pernice, 298, fig. 5; here Pl. 40. 3. The midships part of a ship facing left: the straight, very thick hull is pierced by four relieved squares which form large rowing-ports, through which the arms of four rowers are seen, grasping the oars. Above them, slightly below the level of the gunwale, which is decorated with vertical hatching, three more rowers are seated; their oar looms, as well as those of the lower rowers, appear below the hull. Between the two left-hand rowers a vertical line meets the gunwale; it can only be interpreted as a mast; its upper part is missing. In this and the following cases the old deck-supports have been so broadened as to become a part of the ship's side, and the deck, if there is one, becomes a part of the hull rather than superstructure.

32. Sherd from the Acropolis, Athens; as above. Pernice, fig. 6; whence Köster, pl. 28 [23] and fig. 21; here Pl. 40. 4. Part of the midships section of a ship facing left, similar to the above. Three rectangular ports remain, through which are seen parts of the rowers, and oars; above them sit three more rowers; no mast. The upper oars both here and in 31 continue only below the hull and are not shown against the vacant spaces of the rowing-ports, which they should cross. The cataphract portions between the ports are cross-hatched; above them is a relieved horizontal band filled with lozenges, and below another band with oblique hatching. This gratuitous abandonment of the strict silhouette technique is foreign to the true Geometric tradition; both this and the previous sherd must belong to the very end of the Geometric period, perhaps even to the early seventh century.

C. *Cataphract ships with a single bank of rowers, rowing through large oval ports.*

33. Sherd from the Acropolis, Athens; in Athens, National Museum. Pernice, 303, fig. 9; here Pl. 40. 2. Part of the hull of a ship facing right: the thick hull is pierced by four large oval ports, enclosed in which are four rowers almost hidden behind 'hour-glass' shields. Their arms can just be seen, in a rowing position; their oars appear beneath the hull, with almost no distinction of blade from loom. This cursory representation, with its impossibly large rowing-ports, is of interest as being the earliest showing the use of shields as additional protection for the rowers: see below, p. 137.

34. Another, smaller sherd, from the Acropolis; as above. Pernice, 303 and fig. 10. The scale of the ship, of which a small section of the hull

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[23] Köster's pl. 29, also described as Dipylon ware, is not even Geometric, but Corinthian, of the late seventh or early sixth century. See p. 122 below.

remains, is smaller than in 33; one oval port with shield and arm of rower, and the edges of two others, remain. Below the hull, three oars. Almost certainly by the same painter as 33.

Group V.

Archaising style: reversions to the ship-type of Group I on fabric which otherwise shows some Late Geometric elements. (The date of 36, with which 35*a* and 35*b* must be associated, is still a matter for debate, but I prefer a late date.)

35*a*. Fragment from the Dipylon; Louvre; Torr, 17, fig. 3. A ship facing left (stern missing): the hull and ram are formed by a narrow straight line, from which the stem rises vertically. The square-sided fore-platform is topped by a short, regular curved horn. Above the hull are two other horizontal lines joined by oblique strokes, perhaps representing the near- and far-side gunwales and the thwarts. On the ram stands a warrior; another stands at the stern, holding with his left hand the top of the high stern-piece and with his right the edge of the sail. This sail is schematically represented; it is very narrow, and curves down each side of the mast to form almost half the circumference of a circle. Sheets run from its lower edges towards stem and stern, crossing the fore- and back-stay, which are joined to the mast at two-thirds of its height; the mast is topped by a reversed V forming an arrow-head.

35*b*. Fragment from the Dipylon; Louvre, S 529, Giraudon 33861; Torr, 17, fig. 4. The same pattern of crossed lines, representing the middle of the mast and the four rigging-ropes, is all that remains on this small fragment (shown upside-down in the Giraudon photo), apart from the right-hand lower corner of the sail. The arrangement of the rigging, however, with narrow sail right at the top of the mast and stays running from below the sail, is unique in Geometric ship-painting, and there is little doubt that *b* is from a similar ship to *a*, by the same artist. Filling-decoration is a line of dots and two dot-circles with centre dot in *a*, and a dot-encircled swastika and the edge of another ring of dots in *b*: these motifs are predominantly Late Geometric.[24] The shapes and postures of the figures, however, could belong to an earlier period (late Strict Geometric): but belonging as they presumably do to figured colossal vases, these fragments could not in any case be put earlier than the Ripe Geometric period.

36. Oinochoe from the Dipylon; Copenhagen inv. 1628. Furtwängler, *AZ*, XLIII (1885), 131 and pl. 8; *CVA Denmark*, II, pl. 73; *BSA*, XLII, 78, fig. 1; here Fig. 3. This oinochoe (which is of course in a separate

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[24] *Cf.* a Late Geometric bowl in Copenhagen, *CVA Denmark*, II, pl. 72, 4*a*.

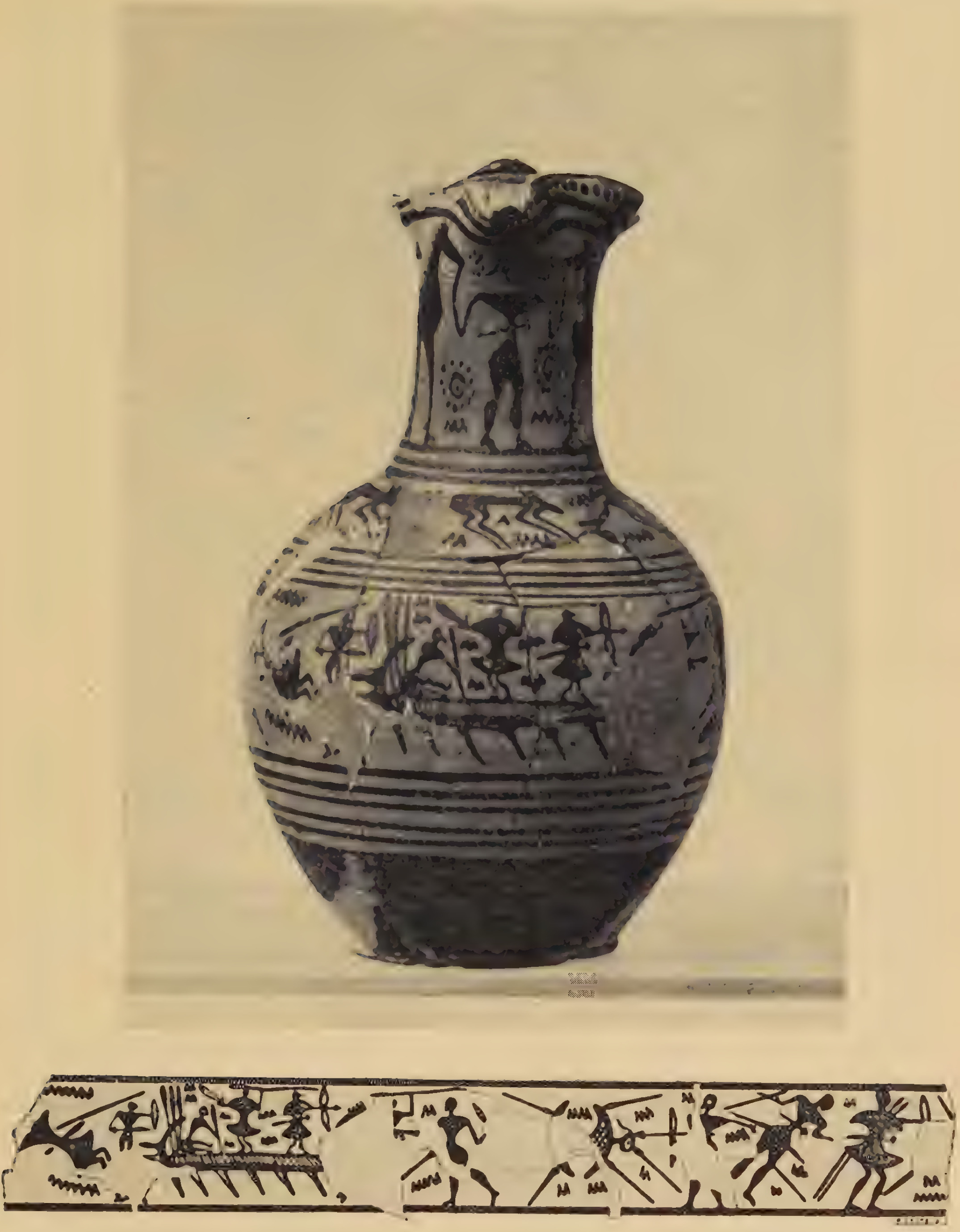

Fig. 3.—Attic Geometric Oinochoe in Copenhagen (36).
(*a*) from photograph of the Danish National Museum, Copenhagen:
(*b*) from *ÖJh* 1909, 55, fig. 40.

category from the big funerary vases) has been frequently discussed, on account of its spirited scenes of land and sea fighting: it probably belongs to the end of the Late Geometric period, because of filling-decoration and shape; although its plastic figure-style might suggest an earlier date. On one side of the main frieze is a ship, of which parts of both extremities are missing. It is extremely difficult to tell which is stem and which stern; the left-hand end is the stern according to Furtwängler and most others, the bow according to Pernice.[25] This left-hand extremity forms a regular curve, from the outer side of which there are two thick protrusions; against it are three ship-spears with well-defined blades. Its lower part, where the ram might have been if Pernice is right, is missing. The hull is thin, and between it and the deck are oblique lines suggesting thwarts, as in 3; but the upper line should be a deck and not the far gunwale, for two warriors are standing and another figure sitting on it. This seated figure, near the left-hand extremity, is leaning forward grasping a spear or (rowing) oar-loom, and is boldly called the steersman by Furtwängler. Six oars appear beneath the hull. All that remains of the right-hand extremity is a high, slightly curving section of a horn, with four stunted branches on its upper side: but it curves upwards and outwards, instead of in towards the centre of the ship as is the usual case with both fore- and after-horns. Land-fighting continues round the vase on either side of the ship.

GROUP VI.

Other Late Geometric ship-scenes. The four documents of this group, of varying fabric and places of origin, revert to the portrait-motive of Group I; the ship forms the whole of the representation, and is not just the central member of a battle-scene. Even in 39 the effect produced by the scene of greeting is no more important than that produced by the large and detailed picture of the ship. Scenes of fighting are absent from this group, which is descended rather from the Strict Geometric ship-style than from the specialised style of the Dipylon ware.

37. Oinochoe from Thebes, Berlin inv. 3143. Furtwängler, *JdI*, 1888, 248, figs. *a–b*, whence Johansen, *VS*, pl. 1, 3; Payne, *Protokorinthische Vasenmalerei*, 21 and pl. 2. This vase is described by Payne as 'Protocorinthian geometric,' and is dated by him (probably too early) near the middle of the eighth century. S. Weinberg, *AJA*, 1941, 30 ff., has distinguished between linear Geometric ware manufactured in Corinth and that manufactured in

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[25] *AM*, XVII, 1892, 300. On the whole Furtwängler's view seems the more probable, since the two left-hand oars below the hull are at a slightly different angle from the others, and are also directly below the one extremity, suggesting that they are steering-oars. But the object grasped by the seated figure cannot possibly be the handle of either of these two oars; rather it is a spear.

some other centre, probably Aegina; he assigns this oinochoe to the second class (p. 42) and dates in the second half of the century.

Payne's photograph shows little of the ship, for which one has to rely on Furtwängler's drawing. The ship runs round the shoulder of the vase, facing left: it has a long, thin, curved hull, with thin ram. The stem is vertical; from the box-like fore-platform rises a horn with four rough branches. The stern appears to be of the high, regularly curved type, without horn. The deck is supported on struts; amidships, the top of a mast remains, with ropes running fore and aft. There are no figures. A single steering-oar blade is seen, and two eyes—one in the usual place, and one close to the stern. Apart from the curve of the hull, partly necessitated by its place on the vase, the type of ship, if not the style of drawing, resembles that of **1**. Torr, p. 17, compares with 35*a*.

38. Bowl from Thebes; Toronto C 199. Robinson, Harcum, and Iliffe, *Greek Vases in Toronto*, no. 113; Payne, *PV*, 9 f. and pl. 3; Köster, pl. 20; Hampe, pl. 22*a*. The vase is of Corinthian manufacture (Corinthian linear Geometric, or ' Protocorinthian geometric '), and belongs to the last quarter of the eighth century (Weinberg *loc. cit.*). On the large panel between the handles is a ship facing left, with full complement of rowers. The long, gracefully curved hull ends in a tapering ram which sweeps back to a low fore-platform of unusual design, with two squat steps; in front of the upper one the tip of what may be an abbreviated horn just protrudes, while on the side of this upper platform is a small relieved circle with centre dot, an unusual kind of eye. The hull-silhouette, or ship's side, is high, and is pierced by twenty-one ovoid rowing-ports, against which are seen the oar-looms, also other vertical strokes which may be thole-pins. The rowers sit at gunwale-level, the whole of their trunks appearing; their backs are rounded and, in general, they differ from the usual Geometric portrayal of the human figure. Apart from nineteen rowers, a small figure is shown forward and a steersman aft, grasping the looms of the two large steering-oars. Behind him is the short, curved stern-piece, which, although it has no distinct horn, bears one small branch. There are single protrusions on stem and stern at gunwale level.

No deck is shown in this ship, which resembles the open penteconter of succeeding centuries more than the usual type of Geometric ship. But the rowers,[26] although shown sitting high out of the ship and rowing over the gunwale, must in fact have sat below the level of the high ship's side (a development of the incorporation of deck-struts into the hull, as in Group IV), and rowed through the rowing-ports. A relieved meander on the fore-platform, and traces of hatching on the stern, combine with ship-type and the shapes of the rowers to suggest a date at the end of the Geometric period.

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[26] It is difficult to see Payne's (*PV*, pp. 9 f.) '. . . extreme clearness with which the rhythm of the repeated forms is allowed to produce its effect.' The figures seem to me to be particularly wooden, and the whole composition to lack life and movement. Contrast **40**.

39. Fragment of a crater from the Agora, Athens; Agora Museum, inv. P 6094. Homer A. Thompson, *Hesperia*, VI, 1937, 122 and fig. 66*a*. The fore-part of a ship facing left, very similar to 38. The hull curves up to a substantial ram, of which the upper side rises to meet a small projecting splashboard, apparently developed out of the fore-platform. There is no horn, and the eye is high up, as in 38. There is a space between deck-line and hull, in which a single strut appears; two further upright lines above deck and splashboard or fore-platform are cut short by the rim of the vase, and their significance is unknown; it is unlikely that they are legs or that any figures were shown. Thompson compares the vase-shape as well as the ship with 38, but says that the fabric 'undoubtedly seems to be Attic.' The date of the sherd appears from its context to be late eighth century. This ship differs from 38 chiefly in that it is not cataphract; the deck-struts have not been widened to form rowing-ports. In the fully developed penteconter as seen, *e.g.*, on the François vase (Fig. 10) there is neither deck-line nor rowing-ports, and the oars were rowed straight over the bulwarks.

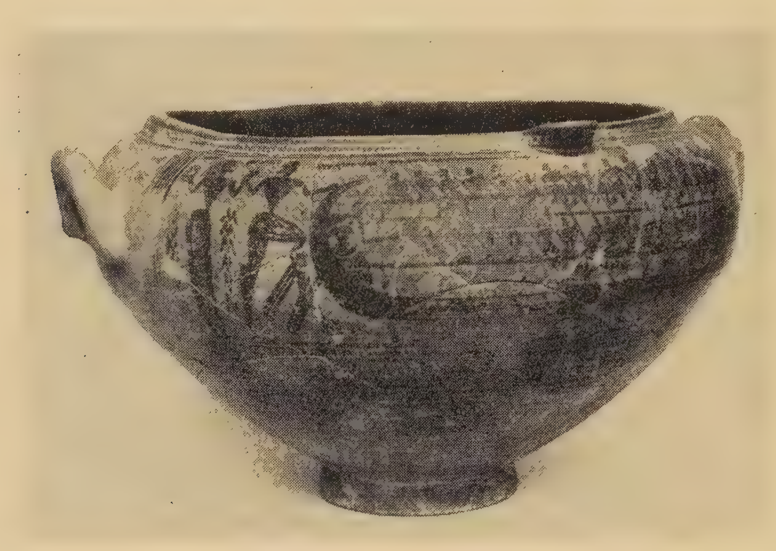

FIG. 4.—BOWL, LONDON 1899. 2–19. 1 (40).

40. Bowl from Thebes; London, British Museum. A. S. Murray, *JHS*, XIX, 1899, 198 ff. and pl. 8; Pernice, *JdI*, XV, 1900, 92 ff. (criticism of Murray's unsatisfactory publication); Köster, pl. 19; Hampe, pl. 22*b*; here Fig. 4. The shape is the same as that of 38 above, but this bowl is of

Attic manufacture. The chariot-scene on one side of the bowl is painted in the style of the Dipylon funerary ware. On the other side is a large ship facing right: at the stern a man, drawn on a larger scale, is just about to step on board. He is turning, and with his right hand grasps the left hand of a woman, who in her other hand holds a wreath. The ship is represented in great detail: it has a low hull with ram, and a very high bow and stern. The fore horn is S-shaped; there is no eye; and above the ram is a long extension of one of the main horizontal beams, pointed, and obviously intended to be a subsidiary ram for tactical use. The stern is regularly curved without horn, and it overtops an unusual after-platform, shown by a tall rectangle enclosing a relieved circle in which is outlined a small Boeotian shield. Two banks of rowers are represented, twenty in the lower bank and nineteen in the upper. The former sit on a horizontal line above the hull, supported on vertical struts. Above their heads runs another line, joining the fore- and after-platforms; on this line rest the feet of the upper bank of rowers, who sit on yet a third horizontal line which is supported by struts from the foot-line. The oar-blades of the lower bank only are shown, for the upper-bank oars are broken off about level with the shoulders of the lower-bank rowers. The steersman stands on the after-platform between the levels of the two banks.

Many of the details of this ship—*e.g.*, the forward horn and fore-platform, and the blades of both rowing- and steering-oars—are typical of the Conventional style, although the general impression given by this top-heavy ship is totally foreign to this style. The painter may have been an individualist trained in this tradition, who determined to break loose from it and show the ship as it really was, with every rower in it. In the attempt to do this [27] he painted the whole of the far-side rank of rowers, complete with far-side longitudinal beams, over the heads of the near-side rank, thus producing a highly deceptive apparent bireme.[28]

The carefully drawn hair of the woman and her decorated skirt suggest that this vase is to be placed right at the end of the Geometric period.

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[27] There was no consistently followed convention of perspective at any stage of Geometric figure-painting, but different subjects were treated by different methods: thus the fact that on the other side of this same vase the farther horse is shown ahead of, and not above, the nearer one, does not preclude the painter's using the vertical and not the lateral plane to represent depth in the case of the rowers. In the case of horse-and-chariot scenes the method of perspective used here was frequently employed on Dipylon vases, which, however, for other subjects—*e.g.*, in prothesis scenes, where mourners are sometimes shown over, for behind, the bier, and in scenes where rows of corpses are shown one above the other—prefer to represent depth vertically.

[28] To the arguments used by Tarn, *JHS*, XXV (1905), 208, n. 96 (the upper beams have no adequate support; the supposed upper oars do not reach the water; the steersman's view is blocked by the upper bank of rowers) against this ship being a real bireme may be added the general criticism that no ship whose silhouette really looked like this could ever have put to sea: it would have overturned at the first wave. Yet the Geometric artist was capable of making straightforward silhouettes fairly accurately, as long as he did not try any fancy tricks with perspective. Incidentally one of Tarn's arguments is not conclusive, for in Group III E, too, struts are never shown for the deck, because the rowers' heads come where the struts should be.

For further discussion of the scene represented see the fourth section below, pp. 149 f.[29]

Late Bronze Age and Pre-Geometric Ship-Representations (*List B*)

(i) Imported LM III sherds from Phylakopi, formerly in Athens. *JHS*, Suppl. IV, pl. xxxii, 11*a* and *b*. Marinatos, *BCH*, LVII (1933), 218–9, fig. 10 and pl. xiii, 16. The larger sherd shows the top part of a ship—the tip of high stem and stern and of the mast, also the hoisted yard with rigging. The right-hand extremity must be the stern, both because of its greater decoration (of a leaf-cluster shape) and because the three ropes running from the mast-top to this extremity, and the one to the other extremity, correspond with the three ropes aft and one forward in (ii) below. In this case Marinatos is correct, as against the original publication, in holding that these two sherds do not form parts of a single ship, but rather of two similar ships from the same vase; for the smaller sherd shows the lower part of a ship facing right, not left like the one above. Part of a thin hull remains, crossed by five rowing-oars and, at the left-hand edge, a thicker stroke which must be a steering-oar. Above the hull-line is another horizontal line which may represent a deck, or perhaps part of the sail.

(ii) Cypriot Mycenaean amphora from Enkomi; Lev.–Myc. III B. *Swedish Cyprus Expedition*, I, 484, no. 262 and pl. I, CXXI, 3–4. Furumark, *Myc. Pottery*, 335 and fig. 56, 40. 1. Two fantastic ships are painted on the frieze round the shoulders and belly; they are of the same kind, and clearly owe more to artistic freedom than to acute observation. The keel curves equally up to stem and stern, which are high, and cannot be distinguished one from the other; one extremity is decorated by curved antennae. A deck runs the length of the ship, supported near one extremity by a vertical bulwark, forming a small separate compartment below deck. On the deck are two large robed figures, facing inwards, with oars of some kind; between them is the mast, which penetrates the deck and has six loops near its top (perhaps representing pulley-loops for the rigging-ropes). Below the deck four small standing figures, two on each side of the mast, face inwards in a backwards-straining posture, as though heaving on ropes. The only conclusions that can safely be drawn from this strange picture are that the vessels had decks on which men could stand—a conclusion that cannot be drawn from any other representations of this period—and that they were without rams, like (v) below.

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[29] It should be remarked that the strange picture of a ship on the Late Geometric (?) bowl, Athens NM 12221, published by Laurent, *BCH*, XXV (1901), 143 ff. and fig. 2 (ref. in Poulsen, *Dipylongräber*, p. 100, n. 6) is false, on the testimony of Prof. Beazley: see S. Benton, *BSA*, XXXV, 75, n. 6. Further, the clay model of a ship described by Köster as 'from Rhodes' (*op. cit.*, fig. 19), and implied by him, p. 88, to be earlier than 500 B.C., is actually of Hellenistic date and uncertain provenience. It is in the library of Corpus Christi College, Cambridge: Torr in Daremberg-Saglio *s.v.* 'Navis' (fig. 5269) described it as Rhodian, also without warrant. The interesting bronze profile of a ship from the Idaean cave (Karo, *ARW*, 1905, *Usenerheft*, pp. 62 ff. and pl. 1; *AM*, 1920, pp. 132 f.; Kunze, *Kretische Bronzereliefs*, 42), which Karo dated to the eighth century and called Ripe Geometric, is in fact probably later. The shapes of the animals from other fragments of the same stand are not at all Geometric (although this does not in itself argue against an eighth-century date), and the warship resembles those of the Boeotian fibulae or the Artemis Orthia relief rather than Geometric types (although there is a resemblance in general lines to **38**): the straight bar fixed at an acute angle to the stern, and projecting below it, apparently a form of decoration, is paralleled, *e.g.*, on the plate-fibula in Thebes, Hampe no. 140, pl. 6—it is certainly quite different from the horn or regularly curved extension which are the only known Geometric appendages to the stern. The ship has five rowers rowing over the gunwale: the captain, with shield, stands in the helmsman's position; behind him stands a woman. Similarly the penteconter-type ships on the Rhodian plates B.M. A719, 720, illustrated in Torr, *loc. cit.*, figs. 14 and 15, are still unaccountably described as Geometric. These plates cannot be earlier than the late seventh century, on grounds of style as well as ship-type. From the second half of the seventh century comes the representation of the bows of a long-ship, with ram (apparently strengthened by two bands), straight horn, eye, and fore-platform, on a gem now in New York: *AJA*, 1942, 489, fig. 1.

Of a Corinthian Late Geometric pyxis (*AM*, 1903, 198, K 65) Johansen, *VS*, 30, n. 1, remarks: 'M. Pfuhl montre peut-être trop d'imagination quand il dit que le motif . . . représente un navire. Le fragment conservé est sûrement inintelligible.' Mr. Dunbabin suggests that a Geometric sherd from Chios (*BSA*, XXXV, pl. 35. 20) may be part of a ship; but this again seems doubtful.

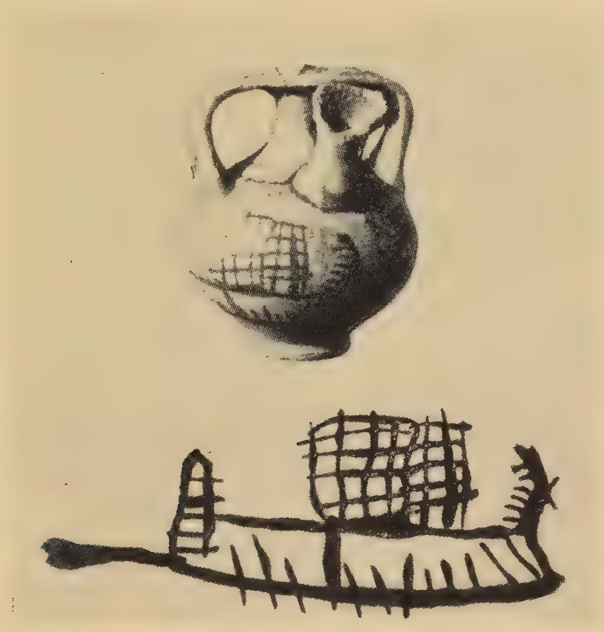

FIG. 5.—STIRRUP-VASE FROM ASINE (iii).

(iii) Stirrup-vase from Asine; transitional LH III to sub-Mycenaean (Myc. III C: I l, Furumark *Myc. Pottery* 335). Frödin and Persson, *Asine*, 300 n. 2 and fig. 207. 2; here Fig. 5. A very rough painting of a ship facing left. To the thin hull-line has been added a long, thick projection for the ram; the stem is high, and there is some sort of platform. The stern-post curves inboard from the end of the keel, then continues nearly vertically high above the deck. Six horizontal projections are seen on its inboard side, and on the other side is a sort of cleat. A rough deck-line joins fore-platform and stern; a thick post near the centre of the ship appears to support it, although this may be the base of the mast, inaccurately placed. Nothing else of the mast is shown, for the sail, represented by a rough square filled by a few horizontal strokes, reaches right down to the deck. Crossing the hull-line and projecting below the ship, a number of oblique strokes represent oars.

(iv) Pyxis from Pylos in Messenia; sub-Mycenaean (Evans and Marinatos describe as proto-Geometric). Kourouniotis, *AE*, 1914, 107 ff., figs. 13–15; Evans, *PM*, II, 246, fig. 143; Marinatos, no. 17, and pl. xiii, 17: the last two reproduce Kourouniotis' sketched restoration, which omits, as decoration, some lines over the ram; see Cohen, *AJA*, 1938, 492. The ship (of which the mast and part of the sail and deck are missing) faces right; it has a thin, straight hull, prolonged beyond the vertical stem-post to a short ram. Above the latticed fore-platform is a fish, attached to the bow probably as a kind of ensign (so Evans, *PM*, II, 26, 242). The stern-piece is an almost vertical continuation of the hull; in front of it is a small latticed after-platform and a single large steering-oar with a complicated type of handle. A deck runs from fore to aft, supported on regular vertical struts; Evans asserts that it is a rail, not a deck. The sail is schematically represented as a rounded rectangle; part of a ring at the mast-top is visible from which stays run fore and aft. Two other ropes running to the after-platform are, perhaps, an additional back-stay and a brace for the yard.

This has always been regarded as a clear prototype of the ships on Geometric vases; it should be remembered that it is not typical of all Late Bronze Age vessels.

(v) Cretan Protogeometric crater from Knossos; in Heraklion. Ninth century;[30] here Fig. 6. In panels on one side of the vase, portraits of ships facing right. These ships, very crudely drawn, have no ram, but a curved, rather high stem. The stern is of equal height, but rises vertically from the keel-line; it is distinguished as the stern by a small protrusion on its lower side which can only be a steering-oar: there are a number of smaller, horizontal protrusions from both stem and stern. The after-platform is represented by a tall rectangle: from it and from the top of the stern rise long, regularly curved horns. The resemblance to animal horns is here unmistakable. No figures, mast, or rowing-oars. Merchant-ships had been popular subjects in Crete in the Late Middle and Late Bronze Age (*e.g.*, Marinatos, no. 40, 54, 55 =

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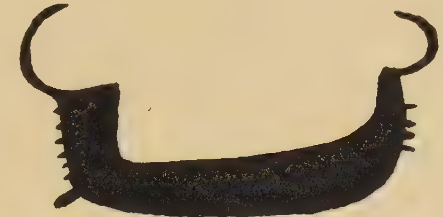
[30] I am indebted to Mr. James Brock for information on this crater and permission to include it here, and to use his photograph and drawing before the full publication of the vase.

Evans, *PM*, II, figs. 139, 141 *a–b*), and this may explain their recurrence here and in (ii).



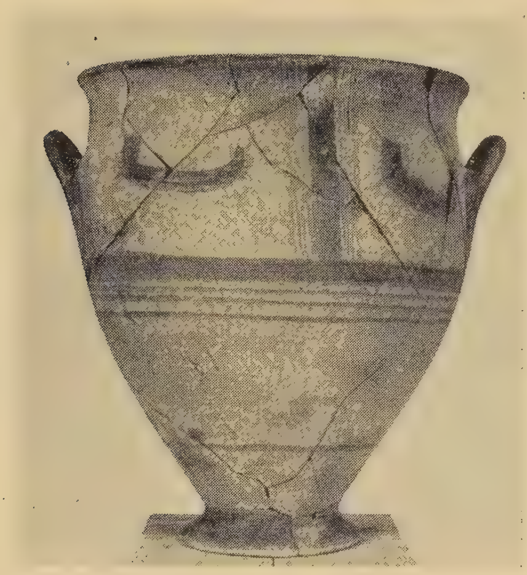


FIG. 6.—PROTOGEOMETRIC CRATER FROM KNOSSOS (v).

List of the most important Seventh Century Ship-Representations (*List C*)

(*a*) Half of a proto-Attic plaque from Sunium; Athens, National Museum. *AE*, 1917, 209; J. M. Cook, *BSA*, XXXV, 173 and pl. 40*b*; here Fig. 7. Cook assigns to the Analatos painter, first years of the seventh century. The after half of a ship facing left: the hull, of medium thickness, curves up gently towards the low stern. Just above the hull is a low deck represented by two parallel lines, supported on regularly spaced vertical struts, of which five remain. On the deck stand five warriors, facing forward, with large round shields. The steersman sits behind a low cross-hatched bulwark at deck level, above which is a single rail joined to the upper part of the stern-piece; he holds the loom of a single steering-oar with an immense oblong blade. The rowing-oars appear to have no owners; they are held to the deck-edge, between the warriors' feet, by pairs of short lines which probably represent the loops or grommets which held them to the thole-pins.

The style of drawing here is totally different from the Geometric, but the structure of the ship is basically the same; the deck is incontrovertible here, and is a superstructure carried above the hull on vertical stanchions. A familiar confusion appears in that the oars terminate above instead of under the deck.

(*b*) Fragment of a proto-Attic crater, from the Acropolis, Athens; Athens, National Museum. Graef, *Antike Vasen von der Akropolis*, no. 412; J. M. Cook, *op. cit.*, pp. 191 f. and pl. 55*c*; who dates *ca.* 670. The stern and steersman of a ship apparently very similar to that in (*a*) above, except that behind the steersman's head appears the end of an after horn, with one branch remaining; in (*a*) the decoration of the end of the stern is not clear. At the left-hand edge of the sherd the deck is just beginning; standing just over it is a small figure.

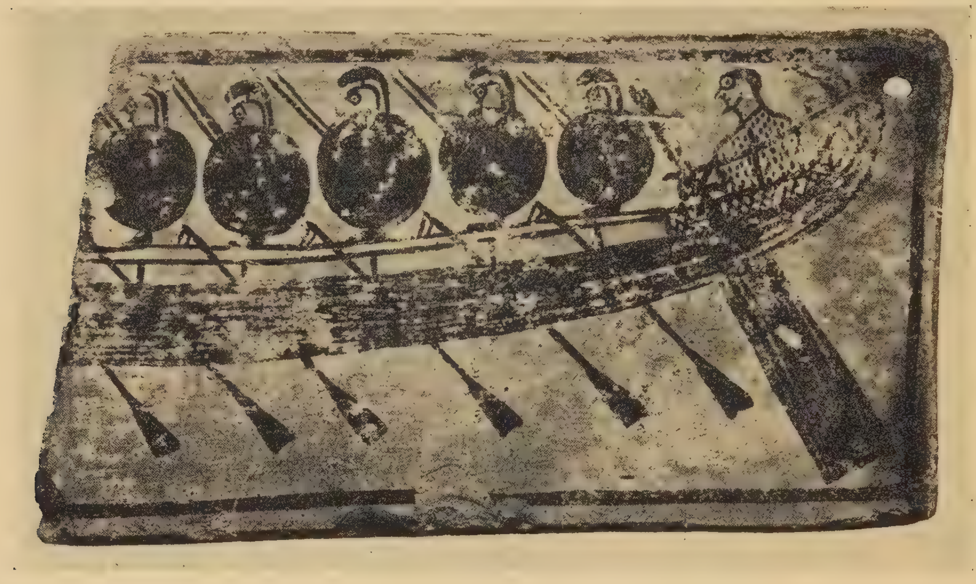


Fig. 7.—Protoattic Plaque from Sunium.
Scale 3 : 4.

(*c*) Crater from Caere; in Rome, Museo dei Conservatori; the 'Aristonothos Crater.' Köster, pl. 35; Pfuhl, *MuZ*, I, § 106 and III, no. 65 (photograph): Pfuhl gives other references. The place of manufacture is in doubt: Argos has been suggested (so Pfuhl), but Magna Graecia seems most likely.

The crater is certainly not much earlier than the mid-seventh century. Two ships are shown engaged in head-on battle: the right-hand one is of a strange type,[31] with a diminutive figure at the mast-top (perhaps a form of decoration and not a real warrior in a fighting-top) and an unusual down-pointing ram. The other ship, like the first, has a high curving stern; also three ship-spears are seen, and a large round shield as protection for the steersman. The eye on the bow is a real eye with pupil, not just a decorated circle, and the ram is taking on the boar's-snout shape common in representations during the next two centuries. Both ships are decked, with warriors standing on the decks preparing to engage; in the right-hand ship, which has a mast without a sail but no rowers, the deck-struts are shown: but the left-hand ship has no mast, and rowers below the deck, and therefore as was the custom in Geometric representations no struts are shown—or only one, forward of the rowers. The oars are apparently rowed through small rowing-ports just below the gunwale.

(*d*) Ivory relief from Sparta; in Sparta. *Artemis Orthia*, 214 and pll. CIX and CX; Köster, fig. 20. Second half of seventh century. A ship facing right: although separated by nearly a century from the Geometric ships, it retains many of the same characteristics: curved ram, fore- and aft-platforms, and simple rigging with two halyards, fore- and back-stay, and fore- and after-braces. The sail is brailed up to the yard with brailing-ropes—a device not seen in Geometric representations. The hull is thick, and this ship looks unusually seaworthy; the line above the gunwale, supported by struts, represents a rail and not a deck, for along it are slung shields, behind which the crew sit. There may, however, have been a narrow central deck, for two figures working at the halyards in the centre of the ship are on a higher level. Aft, the captain greets a woman on the shore, for the ship has probably just arrived. Prof. Beazley has pointed out to me that the direction of the feet, at this stage of figure-representation, is to be taken literally. The captain is therefore stepping off the ship, in contradistinction to **40** above: so *e.g.*, Kunze, *Gött. Gel. Anz.*, 1937, 296.

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[31] The Argive manufacture of the crater was proposed by Furtwängler, *BPW*, XV (1895), 202, and is accepted by Pfuhl, *MuZ*, I, 111 and others; but in this case the *sigma* should be Ϻ and not ξ. An eastern origin has also been suggested, and I understand that this theory has been revived on the strength of the fighting-top with warrior's head, which is best paralleled by the invaders' ships on the Medinet Habu reliefs (*cf.* Lorimer, *BSA* XLII, 124 f.), if it really is a fighting-top; but the rectangle from which a head protrudes on the fibula Hampe 62a is exactly similar to a rectangle without head on another similar fibula, London 3204 (*Cat. Bronzes*, 372); in both cases this rectangle lies on the after side of the mast and in the latter case looks very like some sort of decoration rather than a solid structure capable of bearing a man's weight. This may be the correct explanation here and with the Egyptian ships at Medinet Habu: nothing else suggests an eastern origin for the Aristonothos crater. On grounds of ship-type a western origin is far more probable, and Ducati, *Mélanges d'arch. et d'hist.* 1911, 33, may not be so far from the truth in suggesting Cumae; for the down-pointing ram which is a peculiar characteristic of the right-hand vessel also occurs in the ship on the ivory situla, of about the same date, from the Pania tomb near Chiusi (*Mon Inst*, X, pl. 38*a*; Randall-MacIver, *Villanovans and Early Etruscans*, 250); so, too, does the vertical post above the stem and the sharply curved extremity of the stern-piece. There is no deck in the Etruscan vessel, nor is there anything resembling a fighting-top, but the general similarity is striking. It is at least possible that the representation is of an encounter between a Greek warship from one of the Italian colonies and an Etruscan trading-vessel. The light buff clay of which the crater is made is very similar to the clay of much of the early Etruscan ware, which may argue for an Italian source, as may the vase's provenance of Caere. Miss L. H. Jeffery kindly informs me that she believes the lettering of the inscription to be not incompatible with a painter from Magna Graecia itself, and observes that the Euboic abecedaria on the Formello vase from Veii and the bottle from Caere (Roehl, *Imag.*[3], 81, nos. 31 and 32) nevertheless show a shaky four-stroke ξ, as on this crater, instead of the usual Euboic ς.

Other ship-representations of this century, of minor importance from the point of view of structural comparison with the Geometric ships, may be mentioned briefly. A fragment of a Protocorinthian skyphos from Eleusis (*AE*, 1898, 110 n. 2 ad fin. and pl. 5, 3) shows a rough open ship with ram, rowers, and high bow and stern. A Corinthian tablet (not Geometric, as Köster would have it), Köster pl. 29, shows a thick hull above which are two figures sitting between vertical supports; along the hull are two lines of small relieved circles—probably purely decorative.[31a] Finally many of the Boeotian fibulae, which in spite of Hampe should not be dated earlier than the seventh, and some as late as the sixth, century, have representations of ships; although the size and nature of the medium precludes any great detail being shown.[32] All these ships show a family resemblance, and in some respects are not very different from the Geometric type, although their shortness reminds one of black-figure ships like the ship on the kylix by Exekias in Munich.[33] The plate-fibula from Thebes, Hampe no. 13, fig. 11, might be dated to the first half of the seventh century.[34] This ship has a tall mast topped by a bisected V, with two stays; one large steering-oar;

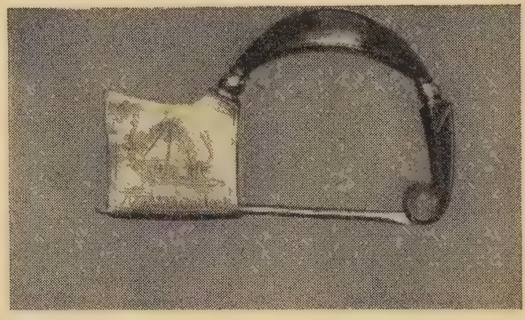

Fig. 8.—Gold Fibula in Elgin Collection, Deposited on Loan in British Museum.

[31a] The Karatepe stone relief of a ship, of which a photograph appeared in *The Times* of February 4, 1949, shows a type evidently wide-spread in the seventh century, similar to (*d*) above and to the Chiusi ship, *v.* n. 31.

[32] See J. M. Cook, *BSA*, XXXV, 206.

[33] Munich 2044. *FR*, pl. 42; Pfuhl, *MuZ*, III, fig. 231; Beazley, *ABS*, 30, no. 21; Technau, *Exekias*, pl. 5.

[34] The contents of the grave from which this fibula comes range from a Late Geometric-transitional amphora to a Late Protocorinthian diadem (Payne, *Necrocorinthia*, 224); but the presence of Group III Geometric features in the ship, especially the forward horn, suggest that it is not very far removed from the Geometric period. See also p. 147, n. 64.

a Dipylon-style horn forward, and an angular quasi-horn, found on many of these fibulae, aft; a ram and a fore-platform; and three protrusions from both stem and stern. The ship on Hampe no. 93 (B.M. 121) is almost identical and must be by the same craftsman. See also Hampe 62 *a* and *b*, pls. 4 and 5; and his list, pp. 90 ff.[35]

II. Interpretation of the Evidence

It is true that the evidence of vase-paintings, and especially of vase-paintings of the Geometric period, when the representation of figures and familiar objects was only at the experimental stage, should be regarded very critically. In particular, complicated subjects like chariots or ships must have presented many difficulties to the artist, not all of which were solved; one must expect errors in detail, especially where the artist has attempted to distinguish different planes. A further likely cause of inaccuracy in all ship-representations is that ships and their exact structure are frequently a mystery to the landsman. The Geometric artists of Attica presumably would not have found it difficult to view ships from a distance, sailing past Phaleron. There is reason to think, though, that not all of them took even this opportunity; for the painters of the Conventional style clearly worked from a traditional artistic prototype, which they elaborated in their own fashion without reference to an actual model—with an eye more to decorative effect than to correspondence with a real contemporary warship.

These limitations of artistic representations as evidence for ship-structure have been sufficiently stressed in the past, not only in the case of Geometric vase-paintings but also of later archaeological evidence. Thus J. A. Davison pertinently observes that ' the artist is neither a photographer nor a naval architect ' (*CQ*, 1941, 24), while W. W. Tarn holds archaeological evidence, especially adverse evidence, to be of little value. But these objections can be over-emphasised, and there are two important reasons for taking Geometric ship-paintings as a basis for the formation of certain conclusions on the real appearance of the warships of the later ninth and eighth centuries. First, there is a remarkable consistency in the type of ship portrayed in Geometric art; not only in one particular style (for the recurrence of certain details in the Conventional style indicates not necessarily a similarity in models, but rather the adoption in closely allied workshops of a common artistic formula for the representation of a ship, a chariot, or a bier) but in three very different styles. In general build, and in most details where there is no question of perspective difficulties, the ships of the early portrait-style (Group I), of the embryonic and then the full Conventional style (Groups II and III), and finally of the individualistic, experimental style (Group VI), show a striking similarity. The natural inference is that the similarity is due to the reasonably accurate portrayal of similar subjects. Secondly, the very limitations of Geometric art make in certain respects for accuracy. The Geometric artist drew in silhouette, and he drew in profile. This means that only the elevation of a ship is given, and that for section and plan one must use guesswork, or be content with ignorance; it also means, however, that provided the artist confined himself strictly to these rules and did not have insolent ambitions to include more in his picture than was actually visible to the observer, *the accurate depictment of shapes was absolutely within his power.* To these considerations may be added the fact that pictures of ships both before and after the Geometric period—the ships of Lists B and C—show a type not in themselves very different from the Geometric, although drawn with a different technique.

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[35] See n. 29 for the seventh-century (probably) bronze relief of a ship from the Idaean cave, and some other seventh-century ships.

Miss S. Benton has recently made the valuable suggestion that the four gold fibulae in the Elgin Collection at the British Museum (Hampe 88. 1–4, pl. 7) are earlier than the Boeotian type, and may belong to the eighth century. The two smaller ones (Hampe 88. 3 and 88. 4) are, on stylistic grounds, as Hampe stated, earlier than the two larger. No. 88. 3 (here Fig. 8) has on one side a rather careful sketch of a ship with large forward horn, fore- and after-platforms, mast-support, and high, curving stern topped by a box-like protrusion. In essentials similar to other ships on fibulae, this representation however gives the impression of being drawn from life. Typologically there is nothing against it belonging to the end of the Geometric period.

The silhouette technique leaves many details of these ships in doubt: thus the presence of a thick horizontal line above the gunwale in a Geometric representation means that *something* was there on the actual ship; but the depth of the object and its relative position to the ship's side remain in doubt—it might be a rail three inches wide over the gunwale, or a deck fifteen feet wide across the whole ship, or a partial deck along the side of the ship, or a partial deck along its centre-line. The choice between these and other alternatives must be largely governed by the assessment of other incidental details, *e.g.*, in this case, how often in Geometric art figures appear to be standing on this line, and how often through it, and whether any allowances have to be made for aberrations in perspective. To the study of Geometric examples must be added a consideration of the probabilities of each possible alternative, determined by the position of the Geometric warship in the general history of ship-structure in Greece: thus the Late Bronze Age and the seventh century cannot be neglected. For example, if it were a fact—which it is not—that no seventh-century ship-representation shows an incontrovertible deck, then the interpretation of the Geometric ' deck-line ' as an actual deck would be extremely hazardous.

Interpretation of attempts to show perspective cannot be made by rule; these attempts were made by individuals experimenting in an unknown field, and different methods were used on different occasions, even perhaps by the same artist. The chief thing is to be aware that such an attempt is being made, and this is at times not easy, as in the case of Geometric apparent biremes; again, a knowledge of the whole field of ship-representations, and the tendencies in construction which they most commonly reveal, is the safest guide. In the explanation of various parts of the Geometric ships which follows, as in certain assumptions made in the description of documents in the previous section, the conclusions are regarded as probabilities, not as certainty: for this, new evidence must come to light, especially new ship-representations outside the Conventional style.

Water-line or keel-line? It is often hard to decide whether the Geometric painter has attempted to draw a ship afloat, or as seen when drawn up on the shore (so Pernice, *op. cit.*, pp. 299 f.) with the bottom and keel exposed. The fact that oars, when shown, are well below the lowest extremity of the painted ship suggests that this extremity is the water-line; for even in ships of shallow draught the oars are not likely to have reached below the keel. On the other hand, the ram cannot have been entirely above the water-line, and most of it was probably under water. The strong curve of the lowest line on many representations, *e.g.*, **14, 18, 26, 38,** led Köster to call this line the keel: but in the earliest examples (Group I) the line is straight, and the thinness of the hull-line, *i.e.*, the low free-board, suggests that the water-line is given, although this cannot be the case in B, v, which is not much earlier than Group I. In Group II the hull begins to have a slight curve, and in the succeeding Conventional style the curve is often strongly accentuated; sometimes, however, this accentuation is clearly for artistic effect, for on the shoulder of a large vase a curved horizontal line was an agreeable contrast to the successive bands of straight decoration-lines. Yet even in the Conventional and later styles (Groups III, IV, VI) some vessels have straight or nearly straight lower hull-lines: *e.g.*, **7*a*, 8, 15, 20, 24, 30.**

Thus the painters of the Group I ships, which have thin, straight hulls, probably intended to represent the water-line; in later groups no rule can be established, and perhaps the variation between straight and curved hull-lines is due to the fact that the artists themselves did not make a clear distinction, but combined their impressions of ships afloat and ships on land. From the decorative point of view they must have preferred the curved lower line, suggesting rather the line of the keel.

The Ram. This name is given to the sharp projection from the stem on its forward side, which occurs in every case where the stem of a Geometric ship is preserved. Its first appearance was in the Bronze Age,[36] in the prolongation of the hull- or keel-lines of the ships scratched on the Syros 'frying-pans' (Early Cycladic III: see *AE*, 1899, 86 and 90; Evans, *PM*, II, 241, fig. 138); and a type of stem suggesting some sort of angular protrusion is seen on Minoan seals, Marinatos, *loc. cit.*, nos. 32–7. Later, the vases from Asine and Pylos (B, iii and iv) give plain examples of the ram; in the latter the direction of the ship is in no doubt, so that there can be no question of a fixed appendage to the stern. (This was Evans' explanation of the 'frying-pan' ships; similarly Kourouniotis, *AE*, 1914, 109). Thus the ram had a long history before it became a standard part of the ninth- and eighth-century Greek warship. Lack of knowledge about early navies in the Aegean and the tactics they used makes it dangerous to say definitely that the ram was not at first an instrument of battle, but rather a necessary structural part of the ship; but I suspect this to have been the case.[37] Certain horizontal protrusions beyond stem (**7*a*, 9, 11, 15, 18, 26, 27**) and beyond stern (**5, 6, 14, 17*b*, 26, 38**) occur frequently in Geometric painting, and in B nos. iii (perhaps) and v; they do not occur on the Group I ships, possibly because as with some earlier cases the paintings were too small or too crude to include them. The only feasible explanation of these protrusions[38] is that the method of construction of these ships demanded that the main horizontal timbers of the ship's side should be left protruding a little way on either side of the stem and stern,[39] for strengthening purposes (perhaps in default of an adequate technique of dovetailing they were lashed together on each side of the vertical post), and to protect the stem from casual damage. This is the clue to the origin of the ram. When the Bronze Age shipbuilder first turned from the construction of the merchant-ship type, with its curved stem and stern formed by a direct prolongation of a curving keel, to the building of narrow, shallow-draught vessels which, to reduce water-resistance, had to have a narrow upright cutwater, he must have found that a simple joint between the ends of two timbers set more or less at right angles—keel and stem—was too weak to stand the shock of a head sea or of beaching at speed.[40] To protect this joint from horizontal shocks, and to prevent damage

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[36] See also Lionel Cohen, 'Evidence for the Ram in the Minoan Period,' *AJA*, 1938, 486 ff. Cohen finds no evidence, and sides with Evans and others in taking the higher extremity of Minoan ships as the stem. His refutation of Marinatos' arguments does not seem to me entirely final, and he is forced to admit in some

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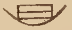
cases a projection of some sort at the bow. The latest contribution to this subject is Charles E. Gibson's 'The Origin of the Ram,' *Mariners' Mirror* 33 (1947), 164 ff., which appeared after I had written this article. Gibson agrees with Cohen that the ram is not found in Minoan ships. His suggestion that it originated as a left-over from dug-outs with planking amidships, to form a projection at both stem and stern, so:  : is perhaps far-fetched, but his explanation of the retention of the ram (p. 165) tallies with that given above.

[37] So Miltner, *loc. cit.*, p. 906; Marinatos, *loc. cit.*, p. 215; Cohen (in the case of B, iv), *loc. cit.*, p. 493; Carpenter, *loc. cit.*, 3 f. It is noteworthy that the northern ships on the Medinet Habu reliefs are ramless; but the 'Peoples of the Sea,' like the Achaean assailants of Troy, used merchant-ships rather than warships as their voyage was a long one and they had to carry large quantities of stores.

[38] In one case only—**40**, at the end of the Geometric period—the single protrusion forward has become a definite tooth, or προεμβόλιον.

[39] *Cf.* the τροποί in Pollux I. 88: οἱ δὲ περὶ τὴν στεῖραν ἑκατέρωθεν παρατεινόμενοι τροποί κτλ.; and the περιτόναια, Pollux I. 89: τὰ δὲ περὶ τὴν πρύμναν προύχοντα ξύλα περιτόναια καλεῖται.

[40] There are no grounds for the common assertion (*e.g.*, Cohen, *loc. cit.*, p. 493, n. 1) that ships were

to the base of the stem, the keel and sometimes other longitudinal timbers[41] were continued ahead of the stem, and slightly pointed to reduce water-resistance. The underside of the ram so formed was given a pronounced upward curve—not visible in the earlier ships, where, as has been seen, the water- and not the keel-line is given—so that even on the steeply shelving beaches common in the Aegean there would be no jarring impact, but a gradual sliding up on to the sand, with the main longitudinal timbers taking any strain. Thus the ram, far from preventing stem-first beaching, actually aided it, according to this theory of its origin. Doubtless its use as a method of holing an enemy ship in a head-on attack was discovered very early, and this additional use ensured the preservation of what was from the constructional point of view perhaps a rather clumsy device.

The Deck. In most of these representations occurs a horizontal line, above and parallel with the near-side gunwale, joining the raised platforms at bow and stern. Frequently this line is supported on short vertical lines from the main hull-structure; these lines may safely be interpreted as struts or stanchions. Does this represent a deck, or just a rail over the gunwale? and if a deck, one covering the whole breadth of the ship, or a narrow one down each side, or a narrow one along the centre-line? The interpretation as a rail is difficult to refute in early paintings where no figures are shown[42] (*e.g.*, B, iv, and A, **1** and **2**; this is Evans' explanation for the Pylos pyxis), and that such rails are known later is proved by, *e.g.*, the Artemis Orthia ivory relief (C, d). But this interpretation does not fit the large majority of documents, especially those of Group III. In at least nine cases (**6**, **9**, **10**, **12**, **13**, **18**, **22**, **28**, **29**) figures are shown actually standing or sitting directly on the line in question, *i.e.*, with their feet or buttocks just in contact with it. Cases where figures or corpses are seen standing or lying above and not directly in contact with this line, such as **3**, **21**, **25**, **35**, are best explained as involving inaccurate drawing or attempts to show perspective. Pernice (*JdI*, XV, 1900, 92 ff.), followed by Miltner (*RE*, Suppl., V, 911), offers yet another explanation for this line: that it merely represents the far-side gunwale. In favour of this theory he cites **4** and **5**, which he holds to be ' typical ' Geometric ships. In fact they are nothing of the sort,

always beached stern-to. It depends mainly on the fact that the Greek ships at Troy were so beached in Homer: but this was because they had to be prepared for a quick get-away, a motive which is present in other stern-to beachings in Homer. When a rapid landing was required, however, ships were rowed straight on to the beach without unnecessary manoeuvres by oar, as in *Od.* 13, 113–15, when Odysseus is landed by the Phaeacians. There the ship is driven so hard on to the beach that only the stern half is left in the water.

[41] That the ram was composed of more than one beam is suggested by later practice. Most important is Dal Pozzo's sketch (Rumpf, *Römische Fragmente*, 15) of a lost portion of the Attic trireme relief. In structural details the sketch may be considered accurate: the ram is clearly shown as composed of extensions of the main horizontal timbers. This relief may be dated to the very beginning of the fourth century. See also Köster, fig. 28 and pl. 40.

[42] Although if it is only a rail, with no more to support than, perhaps, a canvas side-screen, the struts seem unnecessarily numerous.

and the theory quite fails to explain the greater number of cases, especially those of the Conventional style. The thick variety of deck-line, *e.g.*, in **9**, **14**, can clearly represent neither a rail nor a part of the far side of the ship; in fact, in one case only is the far-side gunwale certainly shown, in **40**, where the artist has shown not only the gunwale but also the far-side rowers and the beam on which their feet rest. But this is a unique experiment in perspective, and offers no clue to the meaning of a single line in more simple paintings. Of the three possible interpretations of the upper horizontal line, then—rail, far-side gunwale, or deck—only the last is supported by the majority of extant Geometric ship-paintings. It has been argued, however, that in the three documents of Group III A the figures stand on the floor of the ship, with their legs apparently penetrating the supposed deck-line; therefore it cannot represent a deck, and must have some other significance in this and all other Geometric ships. But all that the Group III A ships prove is that there cannot have been a complete deck over the whole width of the ship; this one would expect anyway from the evidence of Thucydides, i.14.3, that the Athenian triremes built before Salamis ' were not yet decked throughout.' [43] It is not probable that the complete deck, once used, would have been subsequently abandoned; it is this improbability which vitiates Köster's assumption that the artists of Group III A misrepresented the position of the legs of their figures, and that there was in fact a deck over the whole width of the Geometric ship.

If this line represents a partial deck, there remain two alternatives: either there was a single narrow deck or gangway running down the centre of the ship, affording easy communication between the fore- and after-platforms, or there were two narrow decks, one each side of the ship, leaving a gap in the middle. Torr was in favour of the first; Assmann (Baumeister's *Denkmäler* 1596; *JdI*, 1886, 316) produced strong arguments for the second. In favour of the first alternative is the fact that there might be a central gangway in the ship on the Artemis Orthia ivory relief and, in the sixth century, *e.g.*, on one of the two warships on a black-figure vase from Vulci, London B 436 (Torr, *Ancient Ships*, pl. 4, 17; Köster, pl. 44). The occurrence of such a deck in isolated instances later than the Geometric period is not in itself, however, good evidence for that period. In favour of the two side-decks are the following points: (1) the side-deck is the only sort of partial deck which would serve as an effective fighting-deck, *i.e.*, a platform for archers and spearsmen in the old style of naval tactics; this must have been the primary purpose of any deck in the Geometric period, and in fact the representations frequently show warriors fighting from the deck-line. (2) Side-decks above the heads of the rowers would offer them protection against falling missiles. Also only the side- and not the centre-deck would allow the development of the cataphract type of ship of Group IV; the vertical struts or stanchions, which in these ships developed into continuations of the ship's side up to deck level, must have been placed along the gunwale and not inboard. (3) The un-decked space amidships would allow the mast to be lowered, while a central deck, even if it had a cut-away portion at the mast-foot, would have greatly complicated this necessary operation. (4) The postulation of side-decks explains the otherwise puzzling fact that in nearly all representations where the steersman is shown he is standing *below* the level of the deck-line; so in **6**, **16**, **17*a***, **21**, **25**, **28**. (In **9** the same explanation holds good at the bow, for the middle warrior). The steersman's position was on the central fore-and-aft line of the ship: if there were side decks, he could stand half-way between their level and the ship's floor, and still have an uninterrupted view forward between the rowers; when he wanted a clear view of the water just ahead of the ship for manoeuvring he would, of course, mount the after-platform, which for normal work would be unnecessarily exposed.

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[43] If it is shown (as I hope to show in this article) that Geometric ships had partial decks along all their length, there can no longer be any occasion for the common suggestion, improbable on other grounds, too, that this phrase means that the triremes only had platforms fore and aft and no longitudinal deck. Clearly, they had some sort of deck for their whole length, but not over their whole width; in any case, not a watertight one: see pp. 138 f.

These arguments seem to me to be extremely powerful, and I believe that most Geometric warships carried side-decks, which were first and foremost fighting-platforms. They were supported on stanchions from the ship's side and, presumably, from the floor (*i.e.*, the bilge) midway between the ship's side and centre-line. When the artist wished to show the rowers in their proper place below this deck, he omitted the stanchions because they would over-complicate the picture; when the stanchions are to be shown, either there are no rowers because the ship is under sail (as in Group III C), or the rowers are painted on top of, instead of underneath, the deck (as in Group III D). For further remarks on the deck in early Greek ships, see section III below.

Oar-arrangement. Of the sixteen representations of ships being propelled by oar, five (**28**, **29**, **31**, **32**, **40**) appear to show two banks of rowers one above the other; two (**18**, **20**) show rowers rowing from on deck; in four (**5**, **33**, **34**, **38**) there appears to be no deck shown, or its position is not clear; while the remaining five (**21**, **22**, **23**, **24**, [**30**]) have rowers beneath the deck only. All the five apparent biremes can be accounted for by postulating over-ambition and a faulty perspective-technique on the part of the artist; the inclusion of objects strictly invisible to the observer is by no means uncommon in Geometric art, and is well exemplified in prothesis-scenes which show mourners above the bier, instead of behind. **40**, the British Museum bowl (Fig. 4), shows to perfection this ambition to portray more than could be seen, and there are weighty reasons, enumerated in the previous section, against the possibility of its actually being a two-bank ship. The absence of apparent biremes in seventh-century representations is another good reason for attributing the Geometric examples to the particular limitations of the Geometric technique. Another type of failure occurs in **18** (Pl. 38. 2), where the artist has put his rowers on instead of under the deck, avoiding the overcrowding of a small space and at the same time filling two inconvenient blanks in his composition.

A different solution for the upper bank of rowers was proposed by Torr, and has been adopted by Köster and others: that in the five apparent biremes the upper rowers are spare hands, περίνεῳ, called in to row extra, longer oars from the deck in a moment of emergency. Certainly Athenian triremes of the fourth century carried spare oars (κῶπαι περίνεῳ), but even if these were not just replacements for breakages, this is no evidence for such a practice in the eighth century. In addition the manipulation of such extra oars from the deck would have been practically impossible, and would have necessitated the carrying of portable benches (as Köster suggests) and stretchers and thole-pins; none of which are shown in the representations. Finally, it is extremely unlikely that what must have been a rare situation and one of small interest to the landsman would have been thus picked upon by the artist. The choice must remain between real biremes and artist's error; the indications in favour of the latter must be considered very strong indeed.

Steering-oars. Usually two steering-oars are shown; but in Group I, only **1** has two. Earlier, in the vessel on the Pylos pyxis (B, iv) we see a single steering-oar; so perhaps in B, v; and Odysseus' home-made ship[44] is steered with a single πηδάλιον (*Od.* 5, 270); only at *Od.* 12, 218 is a plural word for steering-oar used of a single ship: ἐπεὶ νηὸς γλαφυρῆς οἰήια νωμᾷς. But at *Od.* 9, 483 we find οἰήιον: the plural at *Il.* 19, 543, is of a number of ships, and so in the *Odyssey* with πηδάλια. Thus the use of two steering-oars may have been new in Greece in the Geometric period. In the Conventional style they have a short slender loom and a wide oblong blade, frequently represented by three parallel lines. None of the extant documents shows details of how the steering-oars were operated, but they probably passed through grommets on the two quarters. The T-shaped handles of

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[44] The vague description of the construction of this craft makes it impossible to assert categorically that it was a raft, rather than a crude version of a conventional sailing-boat: the latter seems to me the more probable.

21 and **25** suggest that steering was done by feathering the blade of one oar and turning the blade of the other against the sea, rather than by altering the angle of the loom with the ship's side. The complicated handle on the Pylos pyxis—its details are not clear—does not occur in Geometric examples of ships. During the seventh century the Geometric type of steering-oar was still in use, sometimes single and sometimes double; in C, a, the blade seems to have reached unmanageable proportions.

In the case of the rowing-oars, the blades vary from oval and spade-shaped to elongated triangles; **21** shows two different shapes in the same ship. Evidently this was a matter for artistic preference.

Mast and sail. Some Geometric ships have a mast and sail, in others oars are being used and no sail is shown. As Miltner well observes (*loc. cit.*) it is quite mistaken to suppose like Pernice (p. 294) that there were separate types of ship for rowing and sailing: on the contrary, Greek ships of all periods, both warships and merchant-vessels, carried equipment for both forms of propulsion; although the primary motive power of the warship was undoubtedly oars, and that of merchant-ships sail. With favourable winds blowing, it would be foolish to row, but equally foolish not to have oars available for manoeuvring in harbour or in case of calm, even for the most unwieldy vessel. The Geometric warship must have had a collapsible mast[45] like the Homeric ships. In the *Iliad* and *Odyssey* the sail was taken down and stowed away and the mast lowered into a special crutch at the stern before entering harbour, and oars were used for inshore manoeuvring (e.g., *Il.* 1, 432 ff.). In the Geometric ship there seems to be no mast-crutch, but this may be due to the shortness of the mast, as exemplified in **2, 6, 14, 15,** in comparison with the ship's length; there would have been room to stow it in the ship without any projection over the stern platform, and thus no need for a crutch. Oar-propulsion must have been the rule in battle, as it was with the trireme later. The single oblong sail, even if its area was not so small in proportion to the size of the ship as is indicated by the representations, would not give a great speed even in the most favourable conditions; and it is extremely doubtful whether craft of this build could tack against the wind. When the sail is shown, as in Group III C and **6, 35,** it is filled with cross-hatching (so also in certain Egyptian representations of the time of Rameses III, *cf.*, *e.g.*, Hornell, *Antiquity*, 82 (1947), 70 f.). This has been plausibly interpreted as showing that the sail was made up of small pieces of canvas sewn together, or that it was strengthened with leather strips; however, it may be nothing more than an artistic device to make the sail stand out from an otherwise similar background. The bisected V which tops the mast in **14** and **15** is to be explained not as a fighting-top (!) but as a primitive form of pulley for the halyards. Rigging is simple and obvious, where shown: two halyards by the side of the mast for hoisting the yard, from each end of which a brace (for holding the yard at the required angle to the wind) ran to the fore- or after-platform; and a sheet from each lower corner of the sail. Mast-stays are not often shown, although they must have existed; in **35***a* and *b* there is one fore- and one back-stay, and in **4** the two severed ropes may be fore-stays.

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[45] This is confirmed by **6**, where one ship has mast and sail, and the other, otherwise almost identical, has not (the missing piece of this ship would not leave room for a sail).

Ναύμαχα ξυστά. These are mentioned twice in the fifteenth book of the *Iliad* (388–9 and 677); they were long, heavy spears kept ready for use, upright against the bow or stern—in the *Iliad*, only against the stern. They are represented six times on Geometric vases, four times at the bow (**6, 11, 15, 36**) and twice at the stern (**10, 14**). In **6** a warrior is seen in the act of seizing one of these long spears to replace his own. This simple correspondence between a detail of the Homeric ship and the Geometric warship has afforded endless pleasure; it must be observed, however, that the provision of ready-use boarding weapons, as long as the old naval tactics were in vogue, was plain common sense and much to be expected. The practice is also shown, *e.g.*, on Corinthian tablets: see Köster, pll. 31, 32.

The Eye. In the Conventional style of Geometric ship-painting a relieved circle, filled by an eight- or sixteen-point star, always appears on the bow, where the ship's side rises to the fore-platform. This ' eye ' does not occur in any of the Group I ships, and in Group II it has variant forms: in **4** the small relieved circle is filled by a simple cross, while in **6** the relieved portion is oblong and not round. Among Bronze Age representations only the terracotta model boat from Phylakopi (Marinatos no. 23) has eyes, and if Homeric ships regularly possessed such a distinctive characteristic it would surely have earned a distinctive epithet. The implication is that the eye did not usually appear on Greek ships until the beginning of the eighth century, and that from that time it developed gradually until it became the conscious imitation of an animal or human eye that appears on black-figure vases.[46] The two most plausible conjectures about its purpose are either that it represented or disguised a hawse-pipe through which the anchor-cable ran, or that it was a magic eye painted on the side of the ship, either as an apotropaic measure [47] or to enable the ship to see where it was going.

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[46] In the sixth century the bows of long-ships were frequently made to resemble a boar's head, with eye, snout (the ram) and horn. Miss H. L. Lorimer's remark (*BSA*, XLII, 125) that the same intention is present in some Geometric and even Bronze Age ships is at the least debatable. B, v, shows that horns and ram do not necessarily go together.

[47] See Miltner, *RE*, Suppl., V, 916: some later ships had two eyes each side of the bow. M. follows Assmann in accepting the apotropaic explanation. Of the Geometric ' eye ' he remarks strangely: ' Auf der Schiffen der Dipylonzeit fehlt das Auge durchweg.'

Such magic eyes occur on Egyptian ships of an earlier period, and the custom may well have originated from this source. The hawse-pipe explanation seems less probable, because the anchors on the Geometric warships would not be too heavy to lift straight over the bow, a method used to this day in many Greek caïques; nor is the straight lead which a hawse-pipe provides so necessary in the case of a rope or leather, as opposed to a chain, cable.

The Horns. The prolongation, for decorative purposes, of the stem- and stern-pieces has a long history. Originally the upward curve of the stern was continued above the after-platform, making a half-circle which terminated high above the ship: this seems to have been the rule with Minoan ships, although the sterns of these often ended in a more intricate kind of decoration. It is seen in the pre-Geometric ships B, i, iii, iv, and in a purer form in B, v, and late ninth-century ships of Group I, where the curve of the stern is perfectly regular. In B, v, the first definite horns are seen; but in the mainland ships of Group I the only horn is at the bow, which is strange in view of the greater intricacy which the after horn afterwards developed. Decoration of the bow, too, occurs in Bronze Age representations, although it often took second place; but in list B, i, bow and stern are both high and both decorated. In the Group I ships and B, v, the horn is very simple, being a half-circle based upon the top of the fore-platform, but the resemblance to an animal's horn is striking. During the next fifty years the high continuous stern-piece seems to have been shortened, and a definite appendage added to it, usually represented by a much thinner line, in the form of another horn. 4 may show an intermediate stage when the high stern-piece had been abandoned and no horn added; the other two ships of this group also have immature after horns. In the conventional style the after horn acquires ‘ branches ’ on its upper or after side, three or four short projections like the buds on the horn of a young stag; in 9, 18, and 37 these are seen on the forward horn, which is usually plain. By this time, too, the shape has become more intricate, being a double curve like an irregular and flattened S.

Probably these horns were really intended to represent animal horns; for what purpose one cannot say, although their first clear occurrence on a Cretan vessel, B, v, may suggest a traditional connexion with the Minoan ‘ horns of consecration ’: but no Minoan ship-representation shows such a horn. They may give point to the Homeric epithet ὀρθόκραιραι, although only the decorated stern is specifically mentioned,[48] and one cannot be certain of a corresponding appendage to the bow; perhaps the epithet only described the general curved profile of a ship (the derivation from κεραία is not convincing). However, the horns on B, v and on Geometric ships of the Conventional style recall the front view of a bucranium. Kroker found their origin in the elephant's trunk, Assmann in the branches of a kind of cypress probably inaccessible to the Greeks. It is to be observed, however, that in Group VI the high, regular stern of Group I is returning, and in 38 and 39 the forward horn also has disappeared. In the next century a clear after horn appears on the proto-Attic sherd, C, b; otherwise rarely. In black-figure paintings the decorated stern is again prominent, but does not resemble a horn; it is frequently achieved by the continuation at different angles to each other of the various longitudinal timbers, or of more curved and slender appendages to them: this is well shown on Attic black-figure vases such as London B 436 and the François vase (Fig. 10).

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[48] ἄφλαστον, *Il.*, 15, 717; notice that it is low enough for Hector to grasp from ground level, although I think this point should not be stressed: ἄκρα κόρυμβα, *Il.* 9, 241; the sense demands that this, although a plural, should refer only to the stern. Hesychius equates with ἄφλαστον.

III. The Development of the Early Greek Warship

The theory that Greek shipbuilders of the Geometric period took Egyptian ships as their model is now fortunately almost extinct (but not quite: see E. Marx in *Mariners' Mirror*, 1946–7); there are still, however, scholars [49] who see Phoenician influence at every stage of the development of Greek ship-construction. It is true that from the earliest historical times the Phoenicians appear to have played an important part in the sea carrying-trade, and ranged far afield in and beyond the Mediterranean; in the Homeric poems they almost have a monopoly of sea commerce. Nevertheless ancient authorities are singularly indefinite on the kind of ships they used, and the archaeological evidence is little more helpful. If the helmets of some of the sea-raiders on the Medinet-Habu relief are Philistine, yet their strange vessels, with high vertical stem and stern, and fighting-top, seem to be of Levantine type; there is no reason for regarding them as Achaean. Strictly they resemble no craft that ever sailed the open sea, and the details of their structure may be due largely to artistic fancy; although some non-Egyptian features are certainly included. More definite are the ships on the reliefs in the palace of Sennacherib at Kuyunjik (Nineveh), five centuries later (see Fig. 9); these ships are almost certainly Phoenician-built for the Assyrian fleet. They are high double-bank ships with prominent rams (some are without ram, with high curved stem), but as they are later (between 705 and 686 B.C.) than many Geometric ram-equipped warships there are no grounds for attributing the invention of the ram at least to the Phoenicians. The view of Köster (*op. cit.*, chs. 2–5), confirmed by Marinatos, is far more probable than the theory of Phoenician influence: there is a continuous development from Aegean ships of the Middle and Late Bronze Age, through the transitional ships of the latest Mycenaean and sub-Mycenaean periods, to the Geometric ships depicted on our vases. Minoan and Aegean ship-design was, of course, entirely uninfluenced by Egypt, whose vessels were built within the limitations of the Nile shallows and, initially, of shortage of long timber. In tracing this development, two main classes of ship must be distinguished: the long-distance merchant-ship with high curved stem and stern, and the low, fast, ram-equipped warship; although the distinction of function was not rigid in the early period. Unfortunately extant artistic representations concentrate almost exclusively on one or other class at different periods; thus the warship type appears on the Early Cycladic III 'frying-pans' from Syros,[50] then much later on vases of the latest Bronze Age, and then in the Geometric period. The Middle and Late Minoan seal-stones and clay models, on the other hand, concentrate on the merchant-ship type or on small rowing-boats, while the Cretan Protogeometric crater, B, v, also shows merchant-vessels. A similar disregard of the true warship is shown in the Homeric poems, probably because this type of craft was suitable chiefly

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[49] *E.g.*, J. Charbonneaux in *Préhistoire*, 1932, 230–46, who holds that the Dipylon ships were copied from Syrian models, by way of Cyprus, Rhodes, or Crete.

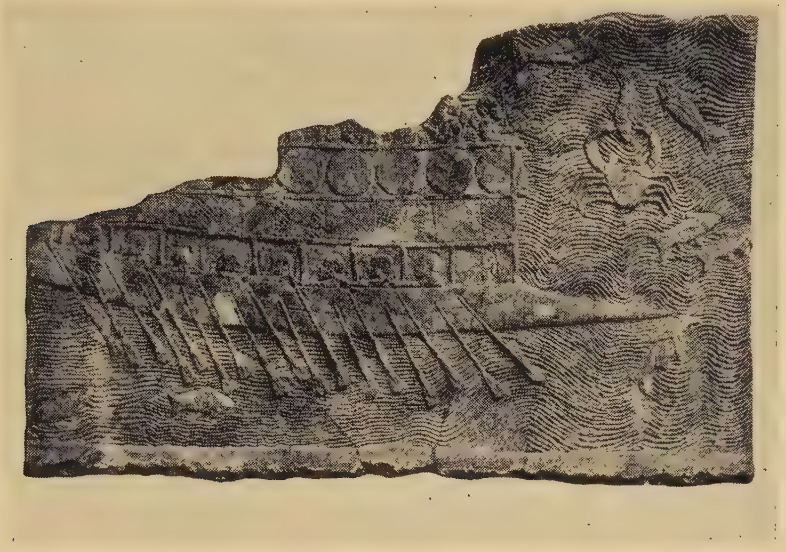

FIG. 9.—RELIEF OF A TWO-BANK WARSHIP FROM SENNACHERIB'S PALACE, NINEVEH (B.M. 124772).

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[50] Evans, *PM*, II, 240 and 241, n. 1, maintains with some force that the apparent ram is here actually at the stern, and represents a fixed steering-device. Marinatos, *loc. cit.*, pp. 182 ff., opposes this hypothesis, I think rightly.

for short-range work such as local raiding or anti-piratical operations, while the transport of an army with stores right across the Aegean demanded the heavier more seaworthy ship with high rounded stem and stern; although without the great beam and draught of the merchant-ship proper, the Homeric φορτὶς εὐρείη. During the Geometric period, again, artistic convention confined itself to the warship type, and the merchant-ship only reappears on black-figure vases. In spite of these gaps it is inconceivable that either class fell entirely into disuse at any stage of the long period of development.

Although the Phoenicians did not invent the ram, there is good reason for thinking that they were the first to use the two-bank oar arrangement. The ships of the Sennacherib-palace reliefs are the earliest certain examples of the bireme (to use a convenient if inexact term), whose high free-board and clumsy oarage would be most likely to be practicable on the swift-flowing but comparatively unruffled waters of the Tigris and Euphrates, where the Assyrian king chiefly employed his fleet. In Greek art there are no certain representations [51] of biremes before black-figure vases of the late sixth century; [52] even then they are rare, and after this period they disappear. The existence of Greek biremes in the early sixth century and possibly as early as the end of the Geometric period has been heavily stressed, as lending support to their particular theory, by the exponents of the three-bank trireme; but to judge by the archaeological evidence the bireme is a very transient phenomenon in Greek maritime history, while literary evidence on this point is practically non-existent.[53] Its brief appearance is best explained as follows. The two-bank rowing system was invented by the Phoenicians, or at any rate outside Greece, probably towards the end of the eighth century. The apparent Geometric biremes are, in fact, single-bank ships wrongly drawn (with the possible, but in my view improbable, exception of **31** and **32**, which might represent an early Greek attempt to adopt the new arrangement). The Greeks certainly built biremes in the sixth century, but soon ceased to do so; after this time there is only the extremely puzzling trireme relief (the Lenormant relief, and a new fragment found in Aquila: see A. Rumpf's important publication, *Römische Fragmente*, 14 ff.) to indicate the continued existence of multi-bank ships in Greek navies. The reason for the disappearance of the bireme must be that the two-bank system, devised by the Phoenicians specifically, perhaps, for Assyrian operations in calm waters, was tried by the Greeks as a means of increasing rowing speed, but was eventually found to be unsuitable for the open sea, and abandoned; the solution to the question of a higher oar: keel-length ratio being found in the ' triple-equipped ' ship rowed *a zenzile*. That this is the true form of the trireme has been keenly and to me plausibly argued by A. B. Cook and W. W. Tarn.

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[51] The Acropolis bireme-sherds, **31** and **32**, might conceivably represent two-bank ships; they come right at the end of the Geometric period, and may well be throw-backs of the seventh century.

[52] *E.g.*, Attic, London B 436; Etruscan, London B 60; *cf.* J. S. Morrison, *Mariners' Mirror*, XXVII (1941), 14 ff. and *CQ*, XLI, 1947, 124. Tarn, *JHS*, 1905, 209 and *Mariners' Mirror*, 1933, 60, denied that a . ˙ . ˙ . oar-arrangement necessitates a true bireme system, *i.e.*, with two super-imposed banks of rowers. But in these vases rowers are only shown for the near-side upper-bank oars (Morrison, *CQ*, 1947, 124 n. 3, points out the inaccuracy in Torr pl. 4, 17, and Köster pl. 44); the other oars must belong to other rowers well below gunwale level, if not directly below the other rowers. It is hard to see how they could be using the same thwart, as Tarn suggests.

[53] The old interpretation of Aesch. *Ag.* 1617 f. as referring to a bireme is no more correct than the solution which takes δορός as = tiller. The statement of the unknown Damastes in Pliny *NH*, VII, 207, that 'biremem . . . Erythraeos fecisse' does not help much, and anyway the following clause shows that Pliny's transmission is unreliable.

An interesting development in the form of the rowing-ship is the evolution of a high bulwark, containing ports for the oars, out of the ' cataphract ' system of the Group IV ships. These last were decked ships in which the struts supporting the deck, between which the oars were rowed, were widened so as virtually to extend the ship's side up to deck level, and leave large rectangular rowing-ports: this had the twofold advantage of affording some lateral protection for the rowers and of keeping some, if not all, of the spray out of the ship. In the seventh and sixth centuries many warships appear to have been undecked, or at any rate only to have had a narrow central deck like C, d or, in the sixth century, the ship on London B. 436. In these cases the ship's side appears to have been extended up to the level of the rowers' shoulders, and the rectangular or oval spaces of the Group IV ships become definite rowing-ports, just big enough to take an oar. These are seen, for example, on the left-hand ship of the Aristonothos crater, C, c, where there is also a deck; the deck being a definite superstructure in the manner of the conventional Dipylon ships of Group III. The promising tendency to make the deck an integral part of the hull structure, seen in Group IV, has been abandoned.

In some ships of these centuries, however, a different system is used to afford protection to the rowers, for in the ship on the Artemis Orthia ivory relief, C, d, the rowers are almost hidden by shields slung along a low rail above the gunwale; so also on a Boeotian bow-fibula, Hampe no. 62a. This use of shields for protective purposes is seen in the case of the Dipylon-type shields which almost fill the oval apertures in 33 and 34; but they appear hung by the gunwale in ships on the approximately contemporary Kuyunjik reliefs, *e.g.*, Fig. 9: it is therefore impossible to say where the custom originated, if indeed it had a single place of origin. Also on a Boeotian fibula, Hampe no. 62a, and on the ship Argo on a metope from the Sicyonian monopteros at Delphi: *v.* de La Coste-Messelière, *Au Musée de Delphes*, 177 ff. and pl. xi.

Very important is the change mentioned above, the disappearance of the deck in some seventh-century and most sixth-century ships. In the seventh century, both undecked and central-decked ships occur: thus the proto-Attic plaque (Fig. 7) and sherd, C, a and b, both show decked ships, as does the Aristonothos crater. On the other hand the Protocorinthian skyphos from Eleusis shows a small undecked ship and the warship on the Artemis Orthia relief is also undecked, or only has a small deck down the centre. The Boeotian fibulae show some decked, some undecked ships, but they are not very good evidence, for the drawing is often rough, and vertical planes are but carelessly distinguished. But if in the seventh century representations are about equally divided between decked and undecked ships, in the following century vase-paintings almost invariably show undecked, open vessels. A good example is Theseus' ship on the François vase (Fig. 10). It is a long, slender craft, apparently a triaconter, obviously narrow in the beam; above the gunwale run two horizontal rails supported by vertical struts which also serve as thole-pins; in rough weather these rails would doubtless carry portable side-screens of the type shown on some ships of the Medinet-Habu relief, and on other black-figure vases. Such side-screens are still seen in modern Aegean caïques. This long, narrow, open type of ship, essentially designed for rowing, although sail would also be used [54] in suitable weather, is the long-ship; the fifty-oared long-ship, or penteconter, became the standard type of Greek war-vessel before the introduction of the trireme. The question arises, why, if one is to believe that all eighth- and many seventh-century warships carried decks of some sort, this type of warship was abandoned for a time in favour of the apparently simpler, more rudimentary penteconter, which according to Thucydides i.14.3 was used extensively in the Athenian fleet until before Salamis. The solution is that the Geometric type of warship was not fast enough to meet the requirements of developing naval tactics, which demanded speed and manoeuvreability: partly because its heavier superstructure necessitated an increase in beam or draught or both, to preserve stability,

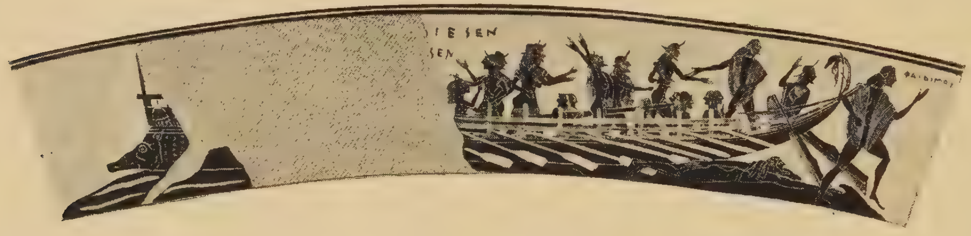

FIG. 10.—FROM THE FRANÇOIS VASE.
(After Furtwängler-Reichhold, *Griechische Vasenmalerei.*)

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[54] Masts are shown, *e.g.*, on the cup by Exekias cited in n. 33 on p. 122.

thus making its water-resistance greater; and partly because the rowers could not be increased beyond a certain number [55] without putting an undue longitudinal strain on the keel.[56] Speed under oar could only be increased over a certain point by adding more rowers, and this, since the two-bank solution was proving a failure, was only to be achieved by a corresponding increase in keel-length. The weight of a deck imposed severe strains amidships, and it was only the lightly built open-boat type which was found to support with safety the keel-length of at least 90 feet necessitated by an increase to twenty-five rowers each side. The change-over from the decked warship of the eighth and seventh centuries probably went side by side with the change from the old-fashioned naval tactics of the land-battle at sea,[57] which needed a deck for the spear-throwing and arrow-shooting combatants to fight from, to the new tactics of manoeuvre and ramming, which needed no deck and for which the penteconter was better suited. One final point must be stressed in connexion with this reversion from decked to undecked ships: the deck of the Geometric ship was never a deck in the full sense, that is, it was not a continuous water-tight cover joining the two sides of the ship, which would vastly improve the safety and seaworthiness of a vessel. Rather it was a mere fighting platform which reduced rather than increased seaworthiness, and as such its abandonment was not such a serious step. The adoption of the water-tight deck, which had not yet been effected in the Athenian fleet at the time of the Persian wars,[58] was a most important advance in ship-construction.

The account given above is largely based upon purely archaeological evidence. The literary evidence for Greek ships of all periods is scanty and often contradictory; it is, naturally, particularly weak for the seventh century and earlier. It seems to be customary to approach the complicated question of ancient ships either from the purely literary or from the purely archaeological point of view, and to deny any merit to the type of evidence not favoured; thus harsh things have been said about the value of vase-paintings in this respect, while the literary evidence has also been assailed as being largely guess-work on the part of the ancient sources. In either kind of evidence the same deficiency may be present: that unless the painter or writer is genuinely interested in seafaring and has some understanding of ships, his evidence on ship-construction is liable to be misleading. Now it may be that some Geometric vase-painters were rowing men, or that Herodotus had a sound knowledge of naval matters rather than a mere naïve curiosity; these things cannot be proved. It is certain that Thucydides had been an admiral, although not necessarily a very good one, and this gives any remarks of his on current naval matters considerable value. On the score of technical knowledge there is otherwise no reason for preferring one type of evidence to the other. In another way, however, the archaeological evidence, at any rate for the ninth, eighth, and seventh centuries, has an important and obvious advantage over the literary: that it was at least contemporary. The vase-painters of the Geometric period or of the century that succeeded the end of this period may have been uneducated landsmen, but one must assume that they had seen an eighth- or seventh-century warship at least once in their lives; this is an advantage that Herodotus or Thucydides certainly never had. Both of these had considerable if varying gifts as antiquarians, and the conjectures of Thucydides' first book are often inspired; but equally often he was led by lack of real evidence and the absence of historical sense in the generations that preceded him into serious errors; thus his remarks on the history of Greek shipping need not be taken as gospel. Nevertheless, it will be seen in the remaining part of this section that the literary evidence, such as it is, accords well with the scheme outlined above of the development of the early Greek ship.

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[55] The largest number of rowers to be assumed on Geometric ships is thirty-eight or forty, on **38** and **40**. These ships may well be exceptional. The fifty oars of some Homeric ships are quite feasible in that far more heavily constructed type.

[56] See Tarn, *Mariners' Mirror*, 1933, 59 f.

[57] Thuc. i.49.1: Thuc.'s words make it clear that the employment of these tactics as late as 433 B.C. was exceptional.

[58] The invention of the water-tight deck may have been very much earlier than this, although if so it was not generally adopted. The Haghia Triada clay model (Marinatos, *op. cit.*, p. 174, no. 23), of the LM II period, has an almost water-tight deck.

There is one literary source which is in the strict sense contemporary with the Geometric period: the Homeric poems. Yet although the *Iliad* at any rate may have been put together in the eighth century, at a time when on the other side of the Aegean painters were producing Geometric representations of ships, the ships described in the poem are undoubtedly the ships of the Achaeans, some four centuries earlier. Sometimes in the *Iliad* the archaic setting is abandoned for a line or two, but there is no indication that this was the case with the descriptions of ships. The Homeric ships are 'equal,' with rounded bow and stern (ἐΐσαι, ἀμφιέλισσαι, κορώνιδες); they have small platforms fore and aft, but are otherwise open; they carry both oar and sail, and the complement varies from twenty to fifty rowers—unless one is convinced by the Boeotian ships in the *Catalogue*. In some respects this is very different from the type of ship portrayed on the Geometric pottery, mainly in the absence of the ram,[59] which entirely altered the appearance of a ship as well as being peculiar to a lower, much narrower type of vessel than that which may be deduced from the descriptions of epic. It is to be expected, as the Late Bronze Age ship-representations show, that in other points there should be similarities between the Homeric ship anp the ships on Geometric pottery; such points are the ship-spears and the fore- and after-platforms and, possibly, the horns and the steersman's bench (θρῆνυς, *Il.* 15, 729), the last of which may appear on **40** and is suggested by the position of the steersman's feet in other representations. These minor common characteristics are not sufficient to justify the too sweeping assertion of Chamoux (pp. 87 f.) that 'le type des navires [on Geometric vases] semble bien répondre aux indications du texte homérique.'

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[59] Even if the epithets ἐΐσαι and ἀμφιέλισσαι are taken to refer not to the profile but to the section of the ship, had there been such a distinctive feature as a ram it would have earned a distinctive and unmistakable epithet of its own. This argument *ex silentio* has already been used in the case of the eye; it is I think a sound one, because the great variety of epithets for ships, some of them rather weak, shows that the poet was anxious to give as much variety as possible to the otherwise similar descriptions of sea-passages. Where external details are meticulously noted (*e.g.*, the epithets μιλτοπάρηος, κυανόπρωρος) it is not likely that the opportunities of eye or ram would be overlooked.

After the Geometric period it is chiefly to the two great historians of the fifth century that one must turn for literary evidence on the history of early Greek ships. The problems arising out of their sometimes confusing accounts are dealt with in a valuable article by J. A. Davison, 'The First Greek Triremes,' in *CQ*, XLI (1947), 18 ff. Davison concludes that the trireme was known in Ionia in the latter part of the sixth century (and certainly not at the end of the eighth century, in Corinth); and that before this penteconters had been used as warships from the early seventh century.[60] The salient passages from Greek authors are noted and summarised below; later sources are not dealt with here, for in most cases their information is nothing but misunderstanding of the fifth-century sources. Perhaps however the tradition reported by Clement, that the Sidonians were the first builders of τρίκροτον ναῦν, is important: see Davison, *loc. cit.*, 21, n. 1.

Archilochus. Fr. 117 Diehl: the 'fifty' are explained by Plutarch, who quotes the line, as the crew of a penteconter, thus in use in the first half of the seventh century.

Hipponax. Fr. 45, 2, Diehl: the word τριήρης is used for the first time here, in the second half of the sixth century.

Herodotus. iv.148.3: Theras used triaconters, in the tenth century: *cf.* the Marmor Parium's statement that penteconters were first used in the sixteenth century.—Neither statement can be taken too seriously, and in any case the ship-terms imply only a certain number of oars, not a special type like the penteconter of the seventh century.

i.163.1–2: (*a*) The Phocaeans were the first Greeks to make long voyages (ναυτιλίῃσι μακρῇσι); it was they who made known the Adriatic and western Mediterranean. (*b*) They used to navigate not in round ships (στρογγύλῃσι νηυσὶν) but in penteconters.—There is no reason to conclude from these statements either that all non-round-ships were penteconters, or that the voyages in the west (to be placed mainly between the foundation of Massalia, *ca.* 600, and shortly after the fall of Phocaea, *ca.* 540) coincided with the first adoption of the penteconter by the Phocaeans.

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[60] In summarising the archaeological evidence he deals somewhat inconclusively, perhaps, with the biremes on black-figure vases, nor does he mention in this connexion the Geometric apparent biremes.

iii.39.3: Polycrates of Samos possessed 100 penteconters *ca.* 539 B.C.

iii.44.2: in 525 Polycrates had forty triremes. (Davison points out that there is no reason why this and the previous passage should contradict one another.)

ii.159.1: Nekos of Egypt built triremes before 608.

Thucydides. i.10.4: Not many non-rowing passengers can have gone on the Achaean ships to Troy, especially because (*a*) the ships had to cross the open sea; (*b*) they were loaded with war materials; (*c*) they were not 'fenced in' (κατάφαρκτα), but equipped in the archaic way, rather like privateers.—Thucydides is here concerned with the seaworthiness of the Achaean ships, and the fact that they were not κατάφαρκτα meant that they were less seaworthy. Now there can have been no question of fully decked ships at that date, either for Thucydides or for his readers, and only a complete deck can affect seaworthiness. Therefore of the two proposed meanings of κατάφαρκτα, 'decked' and 'with lateral protection,' the second must be right; it is also closer to the root-meaning of the word.

i.13.2–3: (*a*) The Corinthians are said to have been the first to use anything like modern methods in shipbuilding. (*b*) Corinth was the first place in Greece to build triremes. (*c*) Ameinocles of Corinth made four ships for the Samians at the end of the eighth century.—Davison has finally destroyed the old misunderstanding that Ameinocles' ships were triremes, for which there is no warrant in the Greek. (*a*) and (*b*) do not necessarily come to the same thing; out of the total number of warships afloat, by no means all would be triremes even in Thucydides' day; τοῦ νῦν τρόπου need not refer specifically to oar-arrangement and the introduction of the τριήρης; the whole phrase (*a*) is indefinite and may well refer to some earlier, more universal revolution in ship-construction, such as the seating of the rowers below the bulwark, rowing through ports—a system first seen in its perfection in a Corinthian vase roughly contemporary with Ameinocles, 38 above. The conjecture that Ameinocles' ships were biremes (*e.g.*, Miltner, *op. cit.*, 936) has little to support it.[60a]

i.14.1: in the second half of the sixth century the strongest fleets of

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[60a] Professor Carpenter in a recent valuable article (*AJA*, LII, 1948, 1 ff.), of which the main point is that the Greeks only penetrated the Black Sea when they could build ships which could be rowed fast enough to overcome the current through the Bosporus, holds that Ameinocles' invention was the Penteconter proper. But 38, 39 and 40 are clearly not true penteconters of the type of the François Vase ship (Fig. 10), which is roughly contemporary with the Phocaean voyages.

Greece had few triremes, but were still equipped with penteconters and long ships, as in the Trojan wars.—πεντηκοντόροις δ' ἔτι καὶ πλοίοις μακροῖς need not make penteconters and long ships mutually exclusive (*contra* Gomme, *Commentary on Thucydides* i, 124 f.); rather the species is first mentioned, then the genus.

i.14.2: shortly before the Persian wars, the Sicilian tyrants and the Corcyreans had considerable numbers of triremes; but Athens, Aegina, and the rest had small fleets, and those mostly composed of penteconters.

i.14.3: even the newly built Athenian triremes at Salamis did not have decks (καταστρώματα) throughout.—There can be no question of διὰ πάσης referring to the length of the ships; it means that the decks of these ships did not extend across their whole width. Longitudinally, there is no middle course between a deck running the whole length of the ship, and simple fore- and after-platforms; and these last could not be connoted by the word καταστρώματα.

The archaeological evidence led to the conclusion that the Geometric partially decked warship, which had probably not more than forty rowers, was replaced during the seventh century by a longer vessel with no deck, or at most a narrow central gangway, and fifty rowers more or less; and that a form of bireme, copied perhaps from Phoenician-built ships designed for inland waters, was tried out in Greece during the sixth century, but was soon abandoned. These conclusions are not contradicted by the literary evidence, and in many points they are confirmed. On two points the literary evidence fails, however: on the transient two-bankers of the sixth century, and on the Geometric ships. The Greek of the fifth century, if by chance he saw a Geometric representation of a ship, must have assigned it vaguely to some foreign influence and failed to realise that it showed a distinct and separate stage in the history of the Greek warship. On another point the literary evidence is indefinite: the relationship between long ships and penteconters. It has already been suggested that ' long ship ' is a very general term applicable to any fast, low, ram-equipped vessel, and epic usage shows that initially ships were described purely by the number of rowers they had, without regard to general build. A combination of these two methods of description would produce greater exactitude; thus I suspect that at a certain stage of naval terminology ships were described in full as, *e.g.*, ' twenty-oar round ship,' or ' thirty-oar long ship,' or ' fifty-oar long ship.' Very rapidly, however, the fifty-oar long ship became established as the long ship *par excellence*, for the rowers could not be further increased with safety; thus it was simply known as the Penteconter. There was still no reason, however, why the Homeric fifty-oar ship should not be described by the same term, nor why long ships should have fifty rather than forty oars: the Geometric warships, with twenty-six or twenty-eight or forty rowers, are long ships.

IV. Why Ship-scenes?

The high proportion of ship-scenes to other scenes on figured Geometric pottery [61] impresses that the choice of this subject is not fortuitous but requires some explanation. Until recently, proposed explanations have all maintained a deliberate connexion between the choice of scene and the funerary purpose of the vases on which most ship-scenes occur. Thus Helbig ('Les vases du Dipylon et les Naucraries,' *Acad. des Inscr.*, XXXVI, i, 1898, 387 ff.) held that such ship-scenes are suitable decoration for the graves of members of the Athenian naucraries. The naucraries existed as far back as the time of Kylon according to Herodotus V. 71 and, it is argued rather boldly, may have reached back to the eighth century. Miss G. M. A. Richter suggested that such a scene represents the naval engagement in which the dead man, 'a sea-captain,' lost his life; and deduced that there must have been an Athenian navy in the Geometric period. On the other hand, F. Chamoux represents a different and fashionable school of thought, holding that these naval scenes are inspired by heroic saga, and intend to represent either specific or generalised legendary engagements. This explanation does not attempt to connect the type of scene with the fact of burial, except in so far as any heroic scene would be counted as a compliment to the dead man.

None of these explanations has taken into account that the Geometric ship-scenes we possess are not exclusively scenes of fighting.[62] In group I only one out of three documents shows fighting; in Group II two out of three; in group III and V all probably show fighting, except **18**—although in sub-group C it may be inferred that it takes place outside the ship, *cf.* **14**; in group IV certainty is impossible, but probably these are 'portrait-ships' without fighting. In group VI there is no fighting. It seems therefore that in the development of Geometric ship-painting at first the ship itself was the main interest, then fighting on and around ships became the rule; finally the ship, with more elaborate details of construction, gained the whole attention of the artist once more. Of the large funerary vases, most have scenes of naval fighting as opposed to just pictures of ships. Does this necessarily entail a deliberate connexion between the fight portrayed and the career of the dead man?

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[61] Our extant fragments cannot have come from much fewer than thirty-five separate vases, of which almost thirty are from the Dipylon area. Some of these have other scenes—land-fighting or lines of chariots or foot-soldiers—as well as ship-scenes, on others bands of decoration; and ekphora- and prothesis-scenes can occur in conjunction with any of these scenes on funerary ware.

[62] While the wild suggestion of A. S. Murray (*JHS*, 1899) for **40**, that it represents the start of a ship-race, part of the funeral games of a nobleman, entirely fails to account for the more numerous fighting scenes.

An affirmative answer to this question, such as that supplied by Miss Richter, involves considerable difficulties, the most important of which is that on this view Athens must have been considerably more active in the naval sphere in the eighth century than is probable on general historical grounds. It is true that the naval fights represented need not have been set engagements in which ships of a regular Athenian navy took part: they may have represented the activities of individual trader-privateers, or even, it has been suggested, the repelling of pirates from the Attic coasts, or again, incidents of the early secondary colonisation activity. Against all these suggestions there is much to be said. Respectable privateering had ceased to be common practice by the late eighth century in the central Aegean at any rate, for the Homeric allusions are presumably archaising and Hesiod some time later does not mention piracy as a danger of navigation; secondly, the central position of the ships in the scenes of land–sea fighting certainly makes the crews (*i.e.*, the pirates), not the shore forces, the heroes of the piece—in any case the ships usually seem (but see **4**, **22**) to be on the winning side; lastly, Athens and Attica took no part or a negligible one in secondary colonising activity. Nor does the hypothesis that although almost all the ship-scene vases are of Attic manufacture, they might portray scenes of the general life of the Aegean, rather than specifically Attic ones, appear plausible. Yet while these difficulties are real ones it still seems conceivable that in the eighth century the foundations of a defensive naval force for Attica were already being laid; the fact that the ship-scenes always show contemporary warships as opposed to merchantmen suggests in itself that sea warfare was not outside the interest of eighth-century Athens. The ships on our vases cannot always be dismissed as Corinthian or perhaps Euboean craft. A deeper knowledge (itself dependent on new archaeological sources) of the history of eighth-century Athens, especially of the degree of its organisation and of its relations with neighbouring and more active city-states, must be attained before any interpretation of the ship-scenes as part of such a background is to become less than hazardous. In addition the completion of work on the Ceramicus finds, together with an attempt to reconstruct from the scattered and unscientific information on the early Dipylon digs the dates of burials in the different sectors of the cemetery, may reveal the significance, if any, of the apparently numerous ship-scene burials.

A denial of any connexion between the ship-scenes and the funerary purpose of many of the vases on which they appear has the advantage that it allows a single explanation to be given both for the scenes of fighting and for the other ship-scenes, which may be divided into simple portraits of ships without figures (**1**, **2**, **37**) and portraits of ships with rowers (**5**, **18**, **38**, and perhaps 31–4). The sporadic occurrence of these non-fighting scenes—even, in the case of 18 (*q.v.*), in group III, which shows on the whole an astonishing uniformity of style and subject—makes an explanation valid for both types highly desirable. Yet the theory that such a denial usually precedes—that the naval scenes are inspired by heroic saga, perhaps even as embodied in epic—does not explain the popularity of the purely portrait type, in which there can be no legendary associations, but presumably only an interest in the ships themselves.

The theory demands closer treatment, for it can be developed so as to indicate the existence and knowledge of heroic saga, or even the Homeric poems, in Attica in the latter part of the Geometric period. It may be pointed out that if one accepts this saga-scene explanation for Geometric ship-paintings, one is bound to postulate the wide propagation of saga on the mainland as early as the end of the ninth century: for 3 shows fighting on board ship in the Strict Geometric period, and one is not justified in seeing 'legendary engagements' in one ship-fight and not in another. F. Chamoux, a recent supporter of this type of view, does not go so far as to say that the Homeric poems were known in Attica at this time, but only that the coincidences between Iliadic descriptions of land and land–sea fighting and the type of (contemporary) warfare depicted on these vases are so great as to suggest that 'Geometric battle-scenes and descriptions in the *Iliad* were borrowed from the same world and nourished by the same observation; consequently they must have been created at the same time.'[63] Miss H. L. Lorimer in her article 'The Hoplite Phalanx,' in *BSA*, XLII, says more definitely that 'the Geometric artist cannot be suspected of having experienced any literary influence,' but somewhat earlier in the same article she remarks 'whether the latest Geometric vase-painting dealt with heroic and mythological subjects or not is a moot point.' She goes on to make the valuable suggestion that the difference in conception between Geometric and Protocorinthian figure-painting is due to the introduction of epic, especially the *Iliad*, at the end of the Geometric period. J. Charbonneaux (*loc. cit.*) adopts a similar position when he describes a ship-combat on a bronze fibula, wrongly dated by him to the mid-eighth century, and in fact probably spuriously engraved, as a representation in almost contemporary terms of a legendary sea-engagement. R. Hampe (*op. cit.*) distinguishes more clearly than most between knowledge and representation of heroic saga, and of heroic saga as portrayed by epic; and he sees a significant correspondence between the adoption of what he calls the 'monumental style' (pp. 74 ff.) in artistic representations even on the small scale, and the

[63] *Loc. cit.*, p. 94.

popularisation of the monumental epics, the *Iliad* and *Odyssey* and perhaps the *Cycle*; both these events he places in the early seventh century.

We know from literary sources—chiefly the undoubted Homeric echoes in the poetry of Archilochus, Callinus, and Tyrtaeus—that the *Iliad* must have been known in some form beyond Ionia at any rate by the middle of the seventh century (its formation in Ionia must, of course, have been earlier than this). Miss Lorimer (*op. cit.*, 105 n. 1) cites the interesting inscriptions from Perachora addressed to Hera λευκώλενος—a literary, not a cult epithet, as she points out—of which 'both are earlier than 650, one possibly of the eighth century and certainly not much later.' But if one can say that the heroic epic is known on the mainland by 650, and if a study of the poems has led to the conclusion that they presuppose a long tradition of heroic saga in Ionia, one cannot necessarily postulate the same tradition in mainland Greece. Hampe sees Boeotia as the centre of mythology and saga on the mainland, but his valuable work is to some extent prejudiced by a tendency to date his evidence too early. Thus some of the Boeotian fibulae with mythological scenes—*e.g.*, Heracles and the Hydra, and the Trojan horse, on London 3205 (Hampe no. 101, pl. 2)—are put as far back as the third quarter of the eighth century; but as Hampe himself shows [64] there is no evidence from the circumstances of discovery for putting any of the figured fibulae into the Geometric period; and the unbiased observer, comparing the shapes of human and animal figures on these fibulae with known Late Geometric shapes, must discover a discrepancy serious enough to discount certain resemblances in detail—*e.g.*, Geometric circular decoration, which however was commonly employed in the seventh century too, and birds and fishes similar to those occurring in many Geometric ship-scenes. It has already been remarked that the ships on Boeotian fibulae, which all belong to one type, are more akin to those of the mid-seventh century (*e.g.*, the Artemis Orthia relief or the Aristonothos crater) than to the Geometric ship. Hampe also dates as Late Geometric some vases which many would call orientalising, and sets the relief-pithoi too early in the seventh century. In short, most of Hampe's Boeotian representations of mythological and saga-inspired, or epic-inspired, scenes do not precede the second quarter of the seventh century.

In order to simplify the study of this important point, which is directly relevant to the interpretation of Geometric ship-scenes—namely the first appearance of representations dependent upon either saga or saga incorporated in epic—I append a list of such representations datable to before the middle of the seventh century: *cf.* also Hampe, App. II, pp. 80 ff.

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[64] pp. 6 f.; his grave-group 2, Thebes, contained three figured fibulae, one with a ship representation, and a very Late Geometric amphora, but also a Late Protocorinthian diadem. Gp. 3, Rhitsona graves 6 & 75, possibly dating back to 700, contained three fibulae, but all unfigured. These are the only attested early grave-groups.

(1) *Geometric.*

(*a*) Four Late Geometric representations of the Aktorione-Molione (?) as Siamese twins: Hampe, 47 ff., *a*, *c*, *d*, and 88 fig. 31 (oinochoe from the Agora); also on a Late Geometric (?) bronze horse from Phigalea (Hampe, pl. 48*b*).

(*b*) Abduction of Helen or Ariadne, on **40** above (Late Geometric bowl in the B.M.): extremely doubtful interpretation; see below.

(*c*) Representations of centaurs, *e.g.*, amphora in Copenhagen, *CVA*, II, pl. 73, 3; cup from the Dipylon, *AM*, 1893, 113, fig. 10; bronze centaur group in New York, Hampe, pl. 30, 3*a*; steatite seal in the Cabinet des Médailles, Paris: Casson, *AJ*, 1927, 41 and pl. v, 9A.

(2) *Protocorinthian.*

(*a*) Slaying of Achilles by Paris (?), on an aryballos from Perachora, in Athens: *BSA*, XLII, 93, fig. 7; T. J. Dunbabin dates *ca.* 690–80.

Cf. another aryballos, Johansen, *VS*, pl. 33, 1 *f*; scene identified by Miss Lorimer, *BSA*, XLII, 100, as the slaying of Achilles.

(*b*) Rape of Helen by Theseus and Peirithoos (?), on an aryballos from Thebes, in the Louvre; Payne, *PV*, pl. 10, 1. Payne assigns to first quarter of seventh century.

(*c*) Centauromachy, on an aryballos from Corinth, in Boston: Payne, *PV*, pl. 11; same date as (*b*).

For other early centauromachies see *NC*, pl. 7; *PV*, pl. 21.

(*d*) Bellerophon and the Chimaera, on two vases of the second quarter of the seventh century: Payne, *PV*, pll. 17; 20. 2–4.

Other Chimaera-representations of the same period: *PV*, pl. 20, 1; *BSA*, XLIII, 16, fig. 7.

(*e*) Marriage of Amphiaraos and Eriphyle (?), on pyxis from Aegina: Payne, *NC*, 98, fig. 30; second quarter of seventh century. (The inscription is not clear enough to make the assignation certain.)

(*f*) Suicide of Ajax (?), on an aryballos in Berlin: Johansen, *VS*, pl. 23, 2.

Also on the Corfu mould, *NC*, pl. 45; and a gem from Perachora, in New York, *AJA* 1942, 489, fig. 1.

(*g*) Geryon (?), on a pyxis from Phaleron, in London: *VS*, pl. 24, 2.

(3) *Protoattic.*

(*a*) Slaying of Nessos, on frr. from the Argive Heraeum; J. M. Cook in *BSA*, XXXV, 191 and pl. 52, dates *ca.* 670.

Also perhaps on frr. in Berlin: *CVA*, I, pl. 11.

(*b*) Menelaos and chieftains on the Menelaos stand from Aegina: *CVA Berlin*, I, pll. 31–3; *ca.* 660.

(*c*) Odysseus escaping from the Cyclops, on the ‘ Ram jug ’ from Aegina, *BSA*, XXXV, pl. 53; *ca.* 650.

Cf. the blinding of the Cyclops on the Aristonothos crater.

(*d*) Chiron, Peleus, and Achilles, on frr. in Berlin: *CVA*, I, pl. 5.

(4) *Argive.*

(*a*) Slaying of Penthesilea by Achilles, on one of the votive terracotta shields from Tiryns, in Nauplia: H. L. Lorimer, *BSA*, XLII, 80 and pl. 18 A (*a*), dates in last quarter of eighth century; Hampe, 81, at end of eighth or beginning of seventh century; J. M. Cook, *op. cit.*, 207, at *ca.* 680–670.

In the Geometric period then only the centaur-scenes are certain traditional subjects, but centaurs belong primarily to folk-tale and need not necessarily be connected with saga, still less with formal epic. Hampe’s extremely ingenious defence of the Molione hypothesis (*op. cit.*, pp. 45 ff.) is not necessarily convincing in the Geometric examples; the fact that the double figure occurs twice over in the frieze of a crater in New York (*AJA* 1915, pll. 21–3; Hampe, 47, fig. 21) is seriously against it. Geometric artists elsewhere avoided any overlap of human figures, so that this alternative interpretation is uncertain, although J. M. Cook’s argument is persuasive.[65] Finally, it seems strange that such an apparently obscure subject from the Pylos saga should be chosen, and portrayed without emphasis in otherwise generalised battle-scenes; also that it should not recur in post-Geometric art. The British Museum bowl, **40**, which shows a man saluting a woman near the stern of a ship, has been the subject of much dispute; Wilamowitz characterised it as a scene of daily life, but since then the view that it represents a mythological abduction has gained ground. Of the two most famous abductions by sea in Greek saga, that of Helen by Paris is the more feasible; Hampe, in accordance with his principle (p. 79) ‘ Die feste Bildkunst wählte aus der Saga das Wichtige, Bezeichnende, die Höhepunkte, liebte in der Darstellung vor allem Deutlichkeit,’ rejects the Theseus and Ariadne interpretation [66] mainly on the ground that the Minotaur adventure and the arrival in Dia, but not the actual flight from Crete, were the key-points of the legend. Yet even the Helen–Paris interpretation has little to support it. The male figure on the bowl is about to step on board; but is there any ground for supposing that the woman is to follow? He turns back towards her and grips her with his right hand by the wrist: this is not a sign of abduction by force, and in any case both Helen and Ariadne went willingly. Rather it is an affectionate form of salutation; it was employed by Odysseus in his farewell to Penelope, *Od.* 18, 257 f.:[67]

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[65] *BSA*, XXXV, 206: ‘ . . . these twins are nothing more than the creation of artists faced with the difficulty of filling a space too broad for a single figure and too narrow for two. The representation of a single body and extremities in duplicate would naturally suggest itself to artists already accustomed to paint horses in that convention . . .’

[66] Supported by von Salis, *Theseus und Ariadne.*

ἦ μὲν δὴ ὅτε τ' ἦε λιπὼν κάτα πατρίδα γαῖαν,
δεξιτερὴν ἐπὶ καρπῷ ἑλὼν ἐμὲ χεῖρα προσηύδα·

So, too, the garland which the woman holds in her right hand, in a typically Geometric attitude, is presumably to be bestowed either upon the captain himself, or upon the ship, as a token of success; in any case it would be a suitable adjunct to a scene of parting between man and wife. The figure of the man is dynamic—he is caught at the moment of stepping on board his ship (he will need a rope-ladder if the vessel is really a bireme), while the woman is entirely static: she is clearly remaining on shore. The scene must be explained with Wilamowitz as an everyday event drawn from the artist's observation; his real interest is the ship which dominates the composition, and he gives his ship life by depicting it at a particular moment, the moment of departure. What better way of describing this moment than by portraying the captain just stepping on board after saying good-bye to his wife?[68]

Thus there is no Geometric representation which we can confidently describe as representing a definite scene from heroic saga, let alone from epic as we know it. From the first quarter of the seventh century come only three aryballoi (nos. 2*a*–*b*, the subjects of which are still arguable), and the Tiryns shield. During the second quarter occur a number of clearly saga-inspired scenes and the view that these depend upon the recent introduction of epic on the mainland is probably correct. Against this view, of course, is the fact that the extant subjects are drawn more frequently from the *Cycle* than from the *Iliad* and *Odyssey*, and many who are willing to concede that an *Iliad* at any rate was known on the mainland in the second quarter of the seventh century would be reluctant to say as much for the Cyclic poems as we know them. This sudden popularity of legendary subjects may be due solely to a change in the artist rather than in the nature of his material; assuming that by this time heroic saga was sufficiently crystallised to provide inspiration, if not to dictate a theme.

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[67] Cf. *Il.* 24, 671 f., Achilles holds Priam's wrist to allay his fear; *Il.* 18, 594 (cf. *Hymn to Apollo*, 196), the dancers on the shield of Achilles hold each other's wrists, not the hands as we do: *cf.* Kunze, *Kret. Bronzereliefs*, pl. 48, 70 b. That this was the ordinary practice in Greek round dances is by no means certain; thus on a Cypriot Iron Age amphora (*BSA*, XXXVII, pl. 8 b); on a fragment from the Amyklaion (*ibid.*, p. 69); and on three Protoattic hydrias (*BSA*, XXXV, pl. 39, 43, 45), it is the hands, not the wrists, which seem to be grasped: *cf.* in general Kunze, *op. cit.*, pp. 212 f. Here rather it betokens special affection—the dance may have been a betrothal-dance, for the girls are ἀλφεσίβοιαι and wear garlands.

[68] *Cf.* C, d, where the scene is more probably one of arrival. The rings from Mochlos and Tiryns (*PM*, II; figs. 147*b* and 142) are irrelevant except perhaps as prototypes of an artistic genre.

Enough has been said to demonstrate that there is no warrant for assuming that any of the Geometric ship-scenes intend to represent mythological or heroic subjects; but that such an intention first appears some quarter-century after the close of the Geometric period. Comparisons with the fighting round the Achaean ships described in *Iliad* 15 have nevertheless frequently been made. It has already been shown that there were essential differences between the ships described in the Homeric poem and the Geometric ships, which there is every reason for believing to be of contemporary build; nor are any resemblances between ship representations and epic descriptions so startling as to warrant any connexion between the two. Chamoux, after noting the occurrence of ναύμαχα ξυστά in both media, observes that in the paintings fighting is usually round the bow (another indication that ram-equipped vessels could beach bow-on), although this is by no means the universal rule, while in *Iliad* 15 the ships are beached stern-to. Chamoux, therefore, cites another sort of land–sea warfare, such as the raid of Achilles on Lyrnessos (*Il.* 20, 191 ff.) or of Odysseus on the Kikones (*Od.* 9, 39 ff.); and certainly such piratical raids are more what the Geometric scenes suggest. They cannot, however, be the exclusive perquisite of heroic saga, and are certainly unimportant among the saga stories incorporated in our extant epics; rather they must have been a not uncommon part of the life of any maritime people at this period. In brief, there is nothing in the Geometric ship-scenes to connect them with any specific incident in legend or to show even that they represent any *extraordinary* event of daily life. Nor should great significance be attached to more general coincidences between epic fighting and Geometric battle-scenes, such as those enumerated by Chamoux, 87 ff. Such incidents were the common coinage of pre-hoplite warfare.

The correct explanation of the numerous ship-scenes does not depend upon any historical factor, nor on a direct connexion between the decoration of funerary vases and the status of the dead. It lies rather in the widening interests and developing technique of the Geometric figure painter. This is a subject which demands separate and extensive treatment and which cannot be approached with confidence until the chronology of Geometric figure-scenes has been more fully elucidated; it is clear, however, from the evidence collected in section I that the ship is considered a subject worth depicting for its own sake as early as the Strict Geometric period. Nor is such a choice surprising: just as it had appealed to the Minoan seal-engravers and modellers in clay, so it appealed even to the staler taste and lesser skill of the sub-Mycenaean era, and more naturally still, at the beginning of a new era of travel and discovery, to the Geometric painter. To the early figure-painters the artefact presented greater possibilities for elaboration than the static human or animal figure: thus the most exciting and complex of artefacts at that time, the ship [69] and the chariot—both of which being a combination of regular curves and straight lines were attractive from the compositional point of view—were excellent subjects, and perhaps the ship more so than the chariot, for it could be drawn by itself without human or animal figures. In 3, however, the artist has added figures to his portrait of the ship, thus giving it life and movement as well as merely technical interest. Violent movement was best expressed by figures fighting; but in 5 a new, more regular, and here more static pose for the human figure is found; for the rowers are shown. The simple ship with rowers could be portrayed by the old portrait technique, and in addition was a good subject for filling small panels: thus it is the type of scene which occurs between the handles of craters (5, 18), while for continuous bands of decoration the longitudinal surge and stress of combatants on the decks and at stem and stern is preferred. The more ambitious artists showed both rowers and combatants; the corpses came in useful for filling odd corners under or over the ship, where too many birds or fishes would become monotonous. As command of detail and interest in perspective grew, the ship itself acquired greater fascination as a subject and thus in group IV (probably) and VI there is a reversion to the simple portrait technique with or without rowers. A certain rhythm of composition was achieved, but there was avoidance of violent stresses of motion, which, indeed, the latest Geometric artists were unable satisfactorily to represent. It appears then that the ship-scene can be explained simply by its suitability for artistic treatment of the Geometric kind, and therefore by the appeal which this subject would naturally have for the artist. This explanation holds for scenes on the funerary and non-funerary vases alike. A ship-scene would be equally appropriate for both: if for household use the vase bore a picture full of edification and interest to the presumably nautically minded, even then, Athenian, while the suggestion of martial valour or, in the case of the pure portraits, of adventures in foreign lands would be considered heroic enough in the general sense of the word to adorn the grave and appease the spirit of the dead. In addition,

[69] The ship, at this time, must have been by far the most striking, because the largest and most complex form of machine. Architecture was at this stage extremely simple; the chariot, the plough or the potter's wheel were simple organisms compared with the rather highly developed Geometric ship. Ship construction often appears to survive breaks in cultural traditions. Purely domestic scenes were not favoured by Geometric painters, otherwise the loom would have made a complex and satisfying Geometric subject.

such a notion would accord well with the superiority of Attic over other Geometric figure-painters, without necessarily entailing the surprising consequence of a greater Athenian interest in naval affairs than Corinthian, for example, or Euboean; for artistic fashion need not march in step with progress in other fields.[70]

G. S. Kirk

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[70] J. M. Cook, Director of the School, gave me the greatest assistance in writing this article as also did T. J. Dunbabin, who has brought much extra material to my notice; my thanks are also due to Mme. Karouzo of the National Museum, Athens, and to M. Devambez of the Louvre Museum; and to Prof. J. D. Beazley and R. M. Cook for reading through the article and making valuable suggestions.

THE DISTRIBUTION OF CHIOT POTTERY

Distribution maps are fashionable among archaeologists, but they are not always used properly. It is not enough to mark the places where objects of a given class have been found; it is important to know also in what frequency they were found, where they have not been found, and where they have not been looked for. To collect this information is often difficult and sometimes impossible since so much excavation has gone unrecorded, and I have therefore chosen one of the easier subjects, the distribution of Chiot pottery in the late seventh and early sixth centuries B.C. Much Chiot pottery is fortunately distinctive, so that even the more conscienceless excavators have often identified it and thought it worth mention, and thus we have fuller data for its distribution than for that of most classes of archaic Greek pottery.

Miss E. R. Price published a detailed account of Chiot pottery in 1924.[1] Since then Dr. W. Lamb has excavated in Chios [2] and there has been much other progress in East Greek studies, so that it is not surprising that some of Miss Price's conclusions need modifying. Chios is now generally recognised as the place of manufacture of this pottery, and the name 'Chiot' is without much protest replacing the older 'Naucratite.' [3] The stylistic development also is a little clearer.

The division of Chiot pottery into a reserving Class A and a b.f. Class B is now unsatisfactory. In fact, as Miss Price herself noticed, there are three main classes, which may be called Chiot Wild Goat style, Chiot Chalice style, and Chiot B.f. style; and there are besides many plain pots. The Wild Goat style is not very different from the common Wild Goat style of the East Greek region, or to be precise its southerly part. It can sometimes be distinguished by a whiter slip, and in its developed phase there are useful pointers in the horseshoe roundel, the continuous fringe of pendent roundels and triangles, the dotting of the belly stripe of animals, and the reservation of odd ornamental patches on birds and animals. Such details are not peculiar nor universal in Chiot, but they are commoner there than in the southern school. Perhaps the best extant specimen of the Early Wild Goat style of Chios is a fragmentary dish in Aegina (Plate 41*a*),[4] if the whiteness of the slip justifies the identification. This is a piece that stands early in the East Greek Orientalising series and for that general reason might be dated about the middle of the seventh century.[5] There is a hint on the dish itself that that date is right: the floral tree has a flat palmette and goose-bill pendants that can be paralleled in Middle Protoattic.[6] Of the developed or Middle Wild Goat style the best specimens are the two complete chalices from Vulci in Würzburg,[7] painted by the same hand and datable by comparison with Wild Goat vases from Rhodes to the last quarter of the seventh century. There are several other pieces of the same stage among the sherds from Naucratis,[8] and perhaps a dinos from Gela in Palermo.[9] The Würzburg chalices seem to represent the beginning of this characteristic Chiot shape (Fig. 1). What we have here is a cup of a type common in the later seventh

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[1] *JHS* 1924, 205–22: some revisions in *East Greek Pottery*, 15–9.

[2] *BSA* XXXV, 157–61. The excavation by E. Eccles of a cave at Ayion Gala has not been published, but Chiot pottery is reported (*JHS* 1939, 203).

[3] The theory that Chiot pottery was made both in Chios and in Naucratis (so E. H. Wedeking, *Archaische Vasenornamentik*, 28) is a desperate compromise.

[4] From a stemmed dish; bands on underside. Found in Aegina. For the photograph and permission to reproduce it I am indebted to Mr. N. Kotzias and Dr. G. Welter, for some notes to Mr. B. Shefton. Another piece that looks as if it might be of the same period is the fragmentary shield from Chios (*BSA* XXXV, pl. 37. 23).

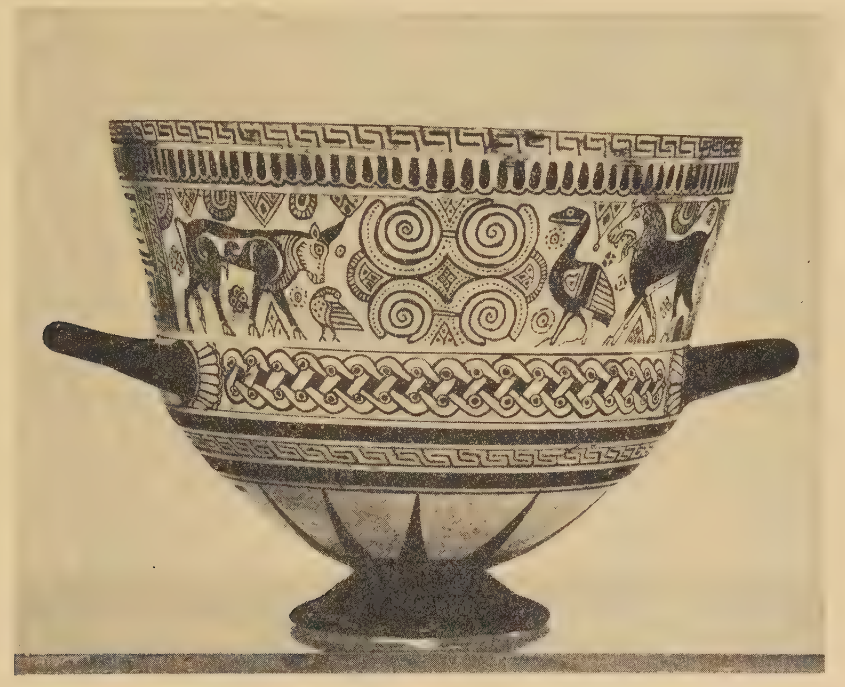

FIG. 1.—WÜRZBURG K 128. CHIOT CHALICE OF MIDDLE WILD GOAT STYLE.
Scale *c.* 3 : 7.

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[5] According to the low chronology outlined in *JHS* 1946, 93–5: *cf.* C. M. Robertson, *JHS* 1940, 6 and 13–6.

[6] J. M. Cook (*BSA* XXXV, 187) observes that these goose-bills are very common in Attic in the second quarter of the seventh century and occasionally appear later.

[7] E. Langlotz, *Griechische Vasen in Würzburg*, K 128 and 129, pls. 13–14 (by the kindness of the Würzburg Museum the front of K 128 is reproduced here as Fig. 1).

[8] E.g., *Naukratis* II, pl. 6; *JHS* 1924, pl. 10. 5 (the other sherds on that plate—except perhaps no. 2—look a little later); *CVA Oxford* II, pl. 396. 2, 4, 6; *CVA Cambridge* II, pl. 496. 16–20, 31–2.

[9] *MA* XVII, fig. 188 (a poor drawing). I have not seen the vase itself and judge from a photo.

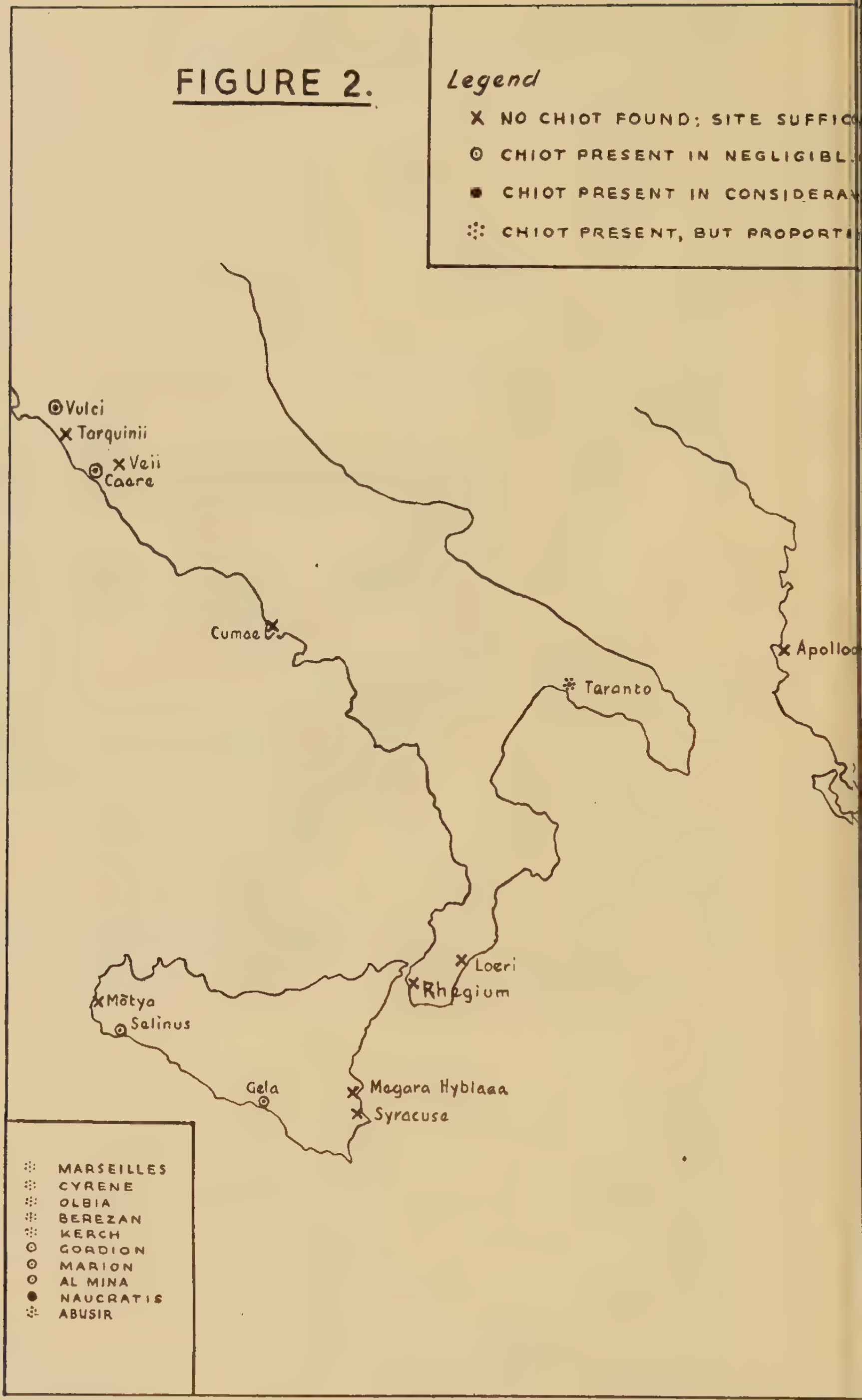
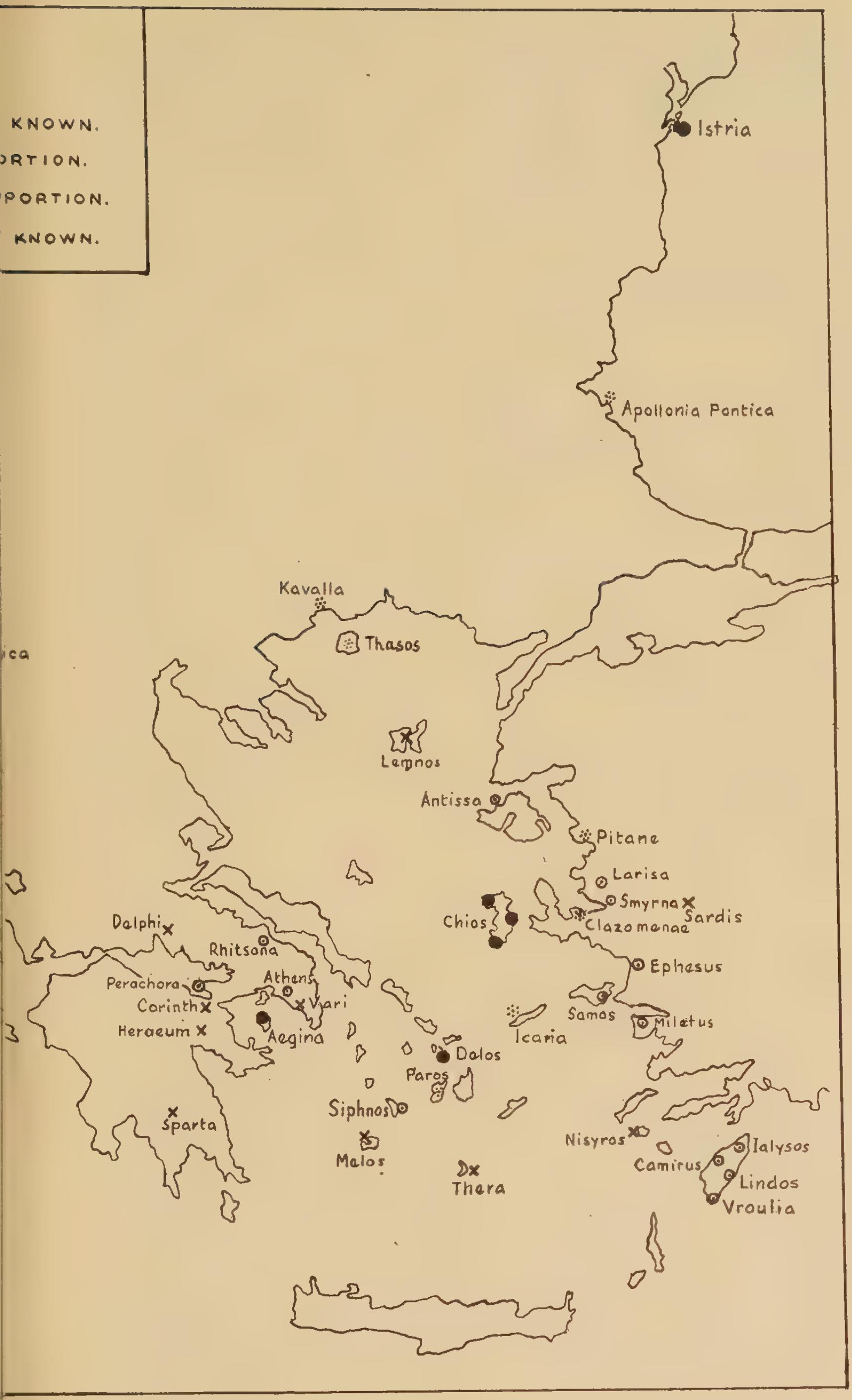


FIGURE 2.
Legend
✕ NO CHIOT FOUND; SITE SUFFIC
⊙ CHIOT PRESENT IN NEGLIGIBL
● CHIOT PRESENT IN CONSIDERA
⁘ CHIOT PRESENT, BUT PROPORTI
Vulci
Tarquinii
Veii
Caere
Cumae
Taranto
Apollo
Loeri
Rhegium
Motya
Selinus
Gela
Megara Hyblaea
Syracuse
MARSEILLES
CYRENE
OLBIA
BEREZAN
KERCH
GORDION
MARION
AL MINA
NAUCRATIS
ABUSIR

Fig. 2.—Distribution of Chiot Potte


KNOWN.
ORTION.
PORTION.
KNOWN.
Istria
Apollonia Pontica
Kavalla
Thasos
ca
Lemnos
Antissa
Pitane
Larisa
Smyrna
Sardis
Clazomenae
Chios
Dalphi
Rhitsona
Athens
Perachora
Corinth
Vari
Heraeum
Aegina
Ephesus
Samos
Miletus
Icaria
Delos
Paros
Siphnos
Sparta
Melos
Thera
Nisyros
Camirus
Ialysos
Lindos
Vroulia

Late 7th and Early 6th Cent. B.C.

century, but with an exaggerated lip in emulation of the kantharos: the rays round the base of the bowl and the emphasis on the handle frieze are survivals from the cup. Further evolution, probably not completed till within the sixth century since an Attic imitation of about 580 B.C.,[10] shows a form not yet fully developed, increases the height of lip and foot and slurs the transition from lip to bowl. Besides the chalice, other shapes for which we have evidence in the Middle Wild Goat style of Chios are the open bowl (with sides turned outwards and sometimes at least plastic heads on the rim) [11] and the phallus cup or rhyton,[12] a freak unexpected so early in East Greek art.

The Late Wild Goat style, which began about 600 B.C., is represented in Chiot only in its reserving manner [13] and was soon abandoned. In its place there appear the Chiot Chalice and B.f. styles, both directly influenced by Corinthian of the early sixth century. The B.f. style with its stock rows of little lions or sphinxes or padded dancers is a counterpart to the Attic Polos style. The Chalice style, which continues the reserving technique, retains some of the traditional East Greek animals, usually carelessly drawn and set solitary in the field, but is also interested in human figures and scenes. Though we find some faces with fleshy profile and receding forehead like the sphinxes of the Middle Wild Goat style, there are other faces that borrow the higher forehead and perky features of Corinthian. The Chiot Chalice and B.f. styles are probably contemporary, lasting from early in the first into the second quarter of the sixth century.[14] To judge by the shapes current in each style, they were largely complementary.

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[10] Athens NM 995 (J. D. Beazley, *Hesp.* 1944, 50, Sophilos no. 10; *AM* LXII, pl. 59. 2). The earlier and lower chalice of the Vlasto collection in Athens (Beazley, *ib.* 44, Anagyrus painter no. 2, pl. 4) probably does not imitate Chiot. Two fragmentary Attic pots of about the 560's are nearer the final Chiot type, but the resemblance may be casual (*Hesp.* 1935, 248 no. 54, fig. 25; 1946, 130 no. 17, pl. 22. 1–2).

[11] B.M. 88. 6–1. 456 (*Naukratis* II, pl. 6; A. Lane, *Greek Pottery*, pl. 17*b*).

[12] 1. B.M. 88. 6–1. 496. Glans and most of underside of penis preserved: length as made up 14·6 cm. A lip should be restored above the goats: opposite the goats the inside is smoothed and painted over. The glans is painted purple. From Naucratis. Plate 41*b*. The organ at the butt end seems to be the female pudenda.

2. B.M. 88. 6–1. 496 *bis*. Fragment of underside of similar but larger cup. From Naucratis.

3. Athens, Acropolis Museum 5043. Glans only preserved, and painted purple. Larger than 1. From the Acropolis, Athens. E. D. van Buren, *Greek Fictile Revetments*, 16 and 184 no. 7, figs. 49–50. (Prof. C. M. Robertson brought this piece to my notice.)

[13] E.g., *JHS* 1924, pl. 10. 7–9, which shows the looser draughtsmanship of the Late style.

[14] That is my impression from stylistic comparison with Corinthian. On the East Greek side the common types of lotus in our two styles are those of the Late Wild Goat style and only once to my knowledge does the succeeding Fikellura type appear (M. Lambrino, *Vases Archaiques d'Histria*, fig. 294). Grave groups help a little. 1. A chalice of the Chalice style with a very much decayed sphinx was found in a grave at Taranto in company with a Corinthian amphoriskos of the 570's. 2. A chalice of good b.f. style with cocks and hen occurred in the rich grave 50 at Rhitsona, the contents of which range from about 570 to the 540's (for this chalice see *JHS* 1909, 332–4, fig. 15 and pl. 25; for the other contents of this grave *BSA* XIV, 257–64; for the date of the grave C. H. E. Haspels, *ABF Lekythoi*, 5, and also J. D. Beazley, *Hesp.* 1944, 57 and H. G. G. Payne, *Necrocorinthia*, 60): and comparison with Corinthian cocks suggests that this Chiot piece might be about 570. 3. A plain chalice turned up in another grave at Taranto of about 580–570. 4. Another plain chalice was included in a tomb from Caere containing objects with a wide range of date but certainly going back to the second quarter of the sixth century (*St. Etr.* I, 161–3, pl. 38*c*). Compare also the remark of Lambrino (*op. cit.* 299) that sherds in reserving and incised technique were found together. R. Carpenter has argued that the letter Ω was not invented much before

The export of Chiot pottery was wide but generally small. Of its Early Wild Goat style one piece has been found in Aegina; of the Middle several at Naucratis, two at Vulci, perhaps one each at Gela and Athens, and there are probably more that have not yet been distinguished as specifically Chiot.[15] But the majority of exports are of the sixth century. I give a list of what I have noticed.

East Greek Region

Clazomenae : several fragments, mostly undecorated. I do not know how high a proportion they were of finds of their period.

Smyrna : Mr. J. M. Cook kindly tells me that the yield of Chiot from the excavation of 1948 was relatively very small.

Larisa : fragments of two large chalices in Chalice style and perhaps a b.f. fragment (Istanbul 6954–6 = Larisa 291, 292, 298).

Pitane : one chance-found chalice with a sphinx (Istanbul 2267: Perrot and Chipiez IX, fig. 202).

Antissa : one fragment of a plain chalice (*BSA* XXXII, 59 and pl. 23. 31). Painted pottery was rare, but grey ware plentiful.

Ephesus : one fragment of a phiale (from Keil's excavations: in Vienna University).[16]

Samos : only few sherds (to 1934 'about as much as from the Acropolis at Athens,' *AM* LIX, 81–2).

Icaria : sherds reported (*JHS* 1944, 89).

Miletus : up to 1909 only twenty fragments had been found (*JHS* 1909, 333–4).

Rhodes : Camirus—three chalices.[17] *Ialysos*—perhaps one plain footless kantharos (*Cl. Rh.* VIII, 43, fig. 26). *Lindos*—four sherds (C. Blinkenberg and K. F. Kinch, *Lindos* I, no. 973 *a–d*). *Vroulia*—sherds of nine chalices (K. F. Kinch, *Vroulia*, 149). Rhodes has been so extensively excavated that we can say that Chiot pottery was rare there, as later was Clazomenian.

Gordion : what looks like the foot of a chalice (G. and A. Körte, *Gordion*, 185, no. 42, fig. 169; *cf.* no. 41).

The Aegean

Delos : from the Heraeum two plain footless kantharoi, three chalices (two in Middle to Late Wild Goat style) and one phiale (*Délos* X, nos. 119–23 and 125, pls. 19–20 and 8); and from the Katharsis grave on Rheneia another chalice with a Chalice style sphinx (in Mykonos). This is a respectable proportion of the contemporary finds exhibited.

Paros : one sherd is reported (H. Prinz, *Funde aus Naukratis*, 88).

Siphnos : only five fragments of chalices, as Mr. J. K. Brock kindly informs me (see now above p. 50).

Thasos : fragments of an open bowl and of another bowl or dish of b.f. style (Istanbul 5285 and 5284 VI). I have not seen the finds in Thasos.

Kavalla, Thrace : sherds reported (*PAE* 1937, 62 and figs. 4–5; 1938, 80 and fig. 4 centre?).

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575 (*AmJPh* 1935, 294–7); since Ω occurs in painted inscriptions on Chiot chalices, these chalices would then be dated not before about 590.

[15] Polychrome decoration of the inside of chalices and some other shapes—a familiar criterion of Chiot—only becomes common at the end of the Middle Wild Goat phase: the Würzburg chalices, for instance, are plain inside.

[16] The sherd illustrated by D. G. Hogarth, *Excavations at Ephesus*, fig. 54, is not (I think) Chiot.

[17] 1. Louvre A. 330 (1), with a Chalice style lion: S. Zervos, *Rhodes, Capitale du Dodécanèse*, fig. 38. 2. Louvre A. 330 (2), plain. 3. Copenhagen 5612, unslipped, with b.f. human figures: K. F. Kinch, *Vroulia*, 151 and pl. 46. 1; *CVA Copenhagen* II, pl. 80. 2.

THE LEVANT

Cyprus : two chalices have been found at the much excavated site of Marion (one with a Chalice style sphinx, the other plain: *JHS* 1946, 5–7 and pl. 1).[18]

Al Mina, Syria : one sherd of a plain chalice (*JHS* 1940, 18, fig. 4*k*). This site was interrupted about 600 B.C.

Naucratis : numerous fragments (e.g., *JHS* 1924, pls. 6 and 9–12; *CVA Oxford* II, pl. 396; *CVA Cambridge* II, pl. 496).

Abusir, Egypt : fragment of oinochoe (?) of b.f. style (Bonn 2002. 14). Little is known of the Greek pottery found here.

BLACK SEA

Apollonia Pontica : fragment of a lid (Bonn 2000. 35) and perhaps a fragment of a chalice (Sofia). I fancy that Chiot was not common in Apollonia.

Istria : a considerable number of sherds mostly of chalices and of the Chalice style (M. Lambrino, *Vases Archaiques d'Histria*, 297–310).

Berezan and Olbia : reported as frequent (see reports in *AA*, 1897–1914).

Kerch : ' numerous fragments ' (*JHS* 1924, 206).

EUROPEAN GREECE

Aegina : besides the fragments of an Early Wild Goat style dish (Plate 41*a*) there are sherds of some twenty or thirty chalices, mostly of Chalice style, and plain footless kantharoi (several in A. Furtwängler, *Aegina*, 455–6).

Athens : besides the probably Middle Wild Goat style phallus cup (see above p. 158, n. 12) there are from the Acropolis sherds of four chalices, one perhaps of Middle Wild Goat, one of Chalice, and one seemingly of b.f. style (B. Graef and E. Langlotz, *AntV* I, nos. 450–3). From the Agora a doubtful fragment (*Hesp.* 1946, 136, no. 34, pl. 24. 6): Mr. T. J. Dunbabin tells me that he has noticed three more sherds in the Agora Museum.

Perachora, near Corinth :[19] two fragments of chalices and possibly another sherd or two.

Rhitsona (*Mykalessus*), *Boeotia :* one chalice with b.f. cocks and hen (see above p. 158, n. 14).

Ithaca : one plain footless kantharos (*BSA* XLIII, 97, no. 586).

THE WEST

Taranto : two chalices, one plain and one with a Chalice style sphinx (see above, p. 158, n. 14).

Gela : perhaps one dinos of Middle Wild Goat style (see above, p. 155).

Selinus : two fragments of chalices, one with a Chalice style sphinx (*MA* XXXII, pl. 83. 4: T. J. Dunbabin, *Western Greeks*, 474).[20]

Caere : one plain chalice, now in the Villa Giulia, Rome (see above, p. 158, n. 14).

Vulci : two Middle Wild Goat style chalices (see above, p. 155).

Marseilles : the scanty published finds include fragments of several chalices (G. Vasseur, *l'Origine de Marseille*, pls. 5. 9–12, 17. 2; another mentioned in text). Other specimens are mentioned by P. Jacobsthal and E. Neuffer, *Préhistoire* II, 8.

Cyrene : fragments of three chalices (*Africa Italiana* IV, 198–200 nos. 10–12, pls. 2–3): but little pottery has been published.

It seems from this list that (outside Chios) Chiot pottery was rare in the East Greek region, except possibly at Clazomenae, but that it was popular in the East Greek settlements of the Black Sea and at Naucratis. It is not found at Tell Defenneh in eastern Egypt, but that has no importance since the main deposit there begins in the 560's and anyhow does not contain cups. In European Greece Chiot is not uncommon in Aegina, extremely rare elsewhere—about as much so as Etruscan bucchero. It is very rare too in Sicily and Etruria. Of South Italy we do not know enough to speak so positively. Marseilles, which was loyal to East Greek pottery in the early sixth century, imported Chiot too. But in most of the Greek world Chiot was a very occasional import. I have tried in Figure 2 to express some of this information on a map. The distribution plotted is that of Chiot pottery of all styles of the late seventh and early sixth centuries B.C.

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[18] P. Dikaios mentions other ' Naucratite ' pottery from Cyprus (*ib.*, 7), but his definition is wider than that used here.

[19] The plastic head from Corinth in Heidelberg (H. Prinz, *Funde aus Naukratis*, fig. on p. 134) looks to me Clazomenian rather than Chiot.

[20] Two sherds in Syracuse from Ortygia (Athenaion) may be from Chiot chalices of Wild Goat style, but T. J. Dunbabin who has seen them thinks not (*Western Greeks*, 475).

The distribution of Chiot is remarkably like that of most East Greek styles, that is it is restricted to certain parts of the East Greek home region, is fairly common in East Greek settlements to north and south, and is very rare in European Greece and most of the West. If pottery is a faithful reflection of the course of trade and the origin of the traders, we are obliged to conclude that generally the East Greek cities that made painted pottery all traded to the same places overseas, that East Greek traders sailing to Marseilles did very little business on the way, and (since Corinthian and Attic pots are common in Asiatic Greece) that trade across the Aegean was almost wholly in the hands of European Greeks. It is more credible that fashion and custom were important factors in the pottery trade and that East Greek pots only found a ready market overseas among the inhabitants of consciously East Greek settlements.

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ADDENDA TO *NECROCORINTHIA*.

ABBREVIATIONS.

The following abbreviations are used in this article, in addition to those ordinarily in use in the *Annual*.

AH	C. Waldstein and others, *The Argive Heraeum.*
Albizzati	C. Albizzati, *Vasi antichi dipinti del Vaticano.*
Amsterdam, Gids	*Allard Pierson Museum, Algemeene Gids,* Amsterdam (1937).
Amyx	D. A. Amyx, ' Corinthian Vases in the Hearst Collection at San Simeon ', *Univ. of California Publications in Classical Archaeology,* i, no. 9 (1943).
Baur, *Stoddard Coll.*	*Catalogue of the Rebecca Darlington Stoddard Collection* (*Yale Oriental Studies : Researches,* vol. 8).
Blinkenberg, *Lindos*	Blinkenberg and Kinch, *Lindos, Fouilles et Recherches,* I.
Boehlau	Boehlau, *Aus Ionischen und Italischen Nekropolen* (1898).
Bonn, A. Greifenhagen	A. Greifenhagen, ' Ausserattische s. f. Vasen im Akademischen Kunstmuseum zu Bonn ', *AA* LI (1936), 343 ff.
Boston, Fairbanks	Fairbanks, *Museum of Fine Arts, Boston, Catalogue of Greek and Etruscan Vases,* I.
Brants, *Leiden*	Brants, *Description of the Classical Collection of the Museum of Classical Archaeology of Leiden, Part II, Greek Vases.*
Coliu, *Musée Kalinderu*	Coliu, *La Collection de vases grecs du Musée Kalinderu* (*Bibl. d'Istros,* vol. i, 1937).
Dohan, *Philadelphia*	E. H. Dohan, *Italic Tomb-Groups in the University Museum,* Philadelphia (1942).
Dugas, *Délos* (X, XVII)	*Exploration archeologique de Délos ;* X : C. Dugas, *Les Vases de l'Heraion* (1928) ; XVII : Dugas, *Les Vases Orientalisants de style non-melien* (1935).
E. von Mercklin, *Führer*	E. von Mercklin, *Führer durch d. Hamburgische Museum f. Kunst u. Gewerbe, II, Griechische u. Römische Altertümer.*
F. de D.	*Fouilles de Delphes.*
Feytmans	D. Feytmans, *Les Vases grecs de la Bibliothèque Royale de Belgique.*
Graef	B. Graef, and others, *Die antiken Vasen von der Akropolis zu Athen.*
Johansen	K. Friis Johansen, *Les vases sicyoniens.*
Kinch	Kinch, *Fouilles de Vroulia.*
Langlotz, *Würzburg*	E. Langlotz, *Katalog d. Martin von Wagner Museums in Würzburg.*
Mercklin, E. von	See E. von Mercklin.
Munich *SH.*	Sieveking and Hackl, *Die königliche Vasensammlung zu München,* I.
NC.	H. Payne, *Necrocorinthia, A Study of Corinthian Art in the Archaic Period* (1931).
Neugebauer, *Antiken*	K. A. Neugebauer and others, *Antiken in deutschem Privatbesitz* (1938).
Neugebauer, *Führer*	K. A. Neugebauer, *Berlin, Führer durch das Antiquarium,* II, *Vasen* (1932).
Payne, *NC.*	See *NC.*
Perachora I	H. Payne, *Perachora : The Sanctuaries of Hera Akraia and Limenia* (1940).
Pottier, *Louvre*	E. Pottier, *Vases antiques du Louvre.*
PV	H. Payne, *Protokorinthische Vasenmalerei* (series Beazley-Jacobsthal).
Raccolta Guglielmi	Beazley-Magi, *La Raccolta Benedetto Guglielmi nel Museo Gregoriano Etrusco,* I : *Ceramica.*
Schaal, *Bremen*	H. Schaal, *Griechische Vasen in Bremen, Abh. u. Vorträge von der Bremer wissensch. Gesellschaft,* Hft. i–ii (1933).
Toronto, RHI	Robinson, Harcum and Iliffe, *Greek Vases at Toronto.*
Ure	P. N. Ure, *Aryballoi and Figurines from Rhitsona.*
Vasseur, *Marseilles*	Vasseur, *L'Origine de Marseille.*
VS	K. Friis Johansen, *Les vases sicyoniens.*
Weinberg	*Corinth* VII, i : S. S. Weinberg : *The Geometric and Orientalising Pottery.*
gr.	grave.
no.	number.
n.	note.
f.b.	flat-bottomed.
EPC, MPC, LPC	Early, Middle, Late Protocorinthian.
EC, MC, LC I, LC II	Early Corinthian (black-figure), Middle, Late Corinthian, period I, II.

In reference to the *Corpus Vasorum Antiquorum* the rubric III C or III Ca is commonly omitted.

Note. The writer wishes to thank Mr. T. J. Dunbabin for the interest and assistance he has given to the present work, both in the provision of material (some from the notes of the late H. G. G. Payne) and in criticism and help of every kind.

The work of publishing the Corinthian pottery from the sanctuary of Hera Limenia at Perachora has suggested the present attempt to offer a few observations on the styles represented in the Corinthian animal-frieze ware and to discuss the chronology of Corinthian pottery in general. There is here no suggestion that *Necrocorinthia* is out-of-date and superseded. If it were, it would be beyond the powers of the present writer to supply the deficiency. Fortunately it seems clearly established that Payne's broad divisions of style and much of his detail stand unshaken by the addition of fresh material to the corpus of Corinthian pottery. There is, however, a continually developing prospect of further division and subdivision of styles and a greater understanding of the interrelation of these.[1] This seems worthy of comment, but it is merely a minor aspect of the present study, in which more attention and importance have been accorded to the need for ascertaining, as far as possible, the extent to which Payne's absolute chronology is justified, in view of the criticism which has been directed against it, notably by Langlotz. Accordingly an attempt has here been made to collect together all the evidence for the chronology of Corinthian pottery, some of which has become available only after the publication of *Necrocorinthia*, and to examine it afresh.

Less important is the problem of what is usually called the ' subgeometric ' style, better described as the ' silhouette ' style, since much of it has few geometric characteristics. Its study seems at first sight a barren task, but in view of the great quantity of pottery in this style forthcoming from the Perachora excavations (though it is poorly represented in museums) and the comparative neglect it has suffered hitherto, it appears useful to discuss this type of decoration and to make some attempt to discover the chronological position of the various forms of silhouette decoration.

The stylistic and chronological discussions are supplemented by comment, under the various headings, on the shapes of Corinthian pottery, following much the same order as Payne's catalogue. The process of studying the Perachora pottery has naturally drawn attention to the fact that some considerable quantity of Corinthian pottery has been published of late years which was not available when Payne produced his great work. The material comes both from the more recent excavations and from the publication of museum collections, some of them not seen by Payne. The vases recently found or published for the first time in museum catalogues, journals, and the *Corpus Vasorum Antiquorum* represent a considerable addition to the catalogue in *Necrocorinthia*. Payne himself made some such additions (*NC.*, 338–43) from works which appeared when his book was in the press, and planned to do more. It has now seemed worth while to catalogue and give a description of such new vases [2] to supplement Payne's lists. Hardly less important are those vases published properly for the first time since 1931, which Payne listed in his catalogue, but for which he could not quote an illustration. The division by shape is that adopted by Payne, but one or two additional shapes are included which were not treated separately by him,[3] and not all of his categories are represented.

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[1] As by Amyx. See n. 5 below.

[2] After consideration it appeared best to list them under the headings of the works in which they appear, except in the case of unpublished vases noted by the writer and others, which figure under museum headings.

Stylistic.

The division of styles here used is that which has become familiar from *Necrocorinthia*, *i.e.*, Transitional, Early Corinthian, Middle Corinthian, Late Corinthian I and II.[4] To a very considerable extent, as Payne points out (*NC.*, 58), the dividing lines are difficult to determine. It is often a matter of personal impression whether a particular pot is thought to be Early Corinthian or early Middle Corinthian.[5] The same is true, to a lesser extent, of the division between Transitional and Early Corinthian. Much the same is true also of divisions into painters and groups. It is tempting to follow the technique which has been adopted with such brilliant success by various scholars in the study of Attic vases, and indeed Amyx [6] expresses the hope that ‘ with time and patience ’ attributions to separate hands may be possible. This may be so, but it is well to remember Payne's dictum (*NC.*, 183) that for the most part (except in the case of the elaborate figured vases) ‘ a thorough analysis of the style in this respect would . . . be a somewhat unremunerative task ’. Nevertheless similarities of style have been pointed out as far as possible, and sometimes it has been found possible to trace ‘ hands ’ and assign further vases to some of Payne's groups. Brief reference has been made where opportunity offered to the great volume of Corinthian pottery from the sanctuary of Hera Limenia at Perachora, which is shortly to be published in *Perachora* II.

A good deal can no doubt be done to distinguish the broad lines in the development of the animal style. In the welter of Corinthian animal styles, superficially so similar, yet varying so much in detail, there are obvious general variations. Some of these have been treated by Payne (*NC.*, 61 ff.), who points out that in the process of disintegration of the Corinthian style different developments took place side by side. Thus he distinguishes the Gorgoneion Cup and Samos Kotyle group, which is allied with a group of

[3] Kalathoi are, however, omitted, since they are poorly represented except at Perachora, where the large numbers found necessitate a fresh study of the shape (by T. J. Dunbabin) in *Perachora* II. The same applies to the dish-form, of which great numbers appeared at Perachora, though they are rare in museum collections.

[4] R. M. Cook in *JHS* LXIV (1944), 113 has rightly pointed out the ambiguity which exists in the nomenclature of Corinthian pottery. It is clear that some change must be made to avoid the ‘ nice distinction ’ of ‘ early Corinthian ’ and ‘ Early Corinthian ’. The change has not, however, been made here since the earliest pottery of Corinth is not under consideration. Early, Middle and Late Corinthian will here be understood to mean Corinthian ‘ Black-Figure ’.

[5] Amyx has pointed out a number of useful criteria in ‘ Corinthian Vases in the Hearst Collection ’, esp. pp. 210–13.

[6] *Ibid.*, 219.

vases in a ‘ delicate ’ style. Quite different from these are the Scale-pattern group, the group of Louvre E 565, and the Chimaera Group. Between the two is to be placed the group of the Dodwell Painter and his successors.

Some, at least, of these groups have been elaborated by Amyx. Taking the group which, after Payne, he calls the Delicate Style,[7] represented by *NC.*, no. 889 (pl. 28, 11), he traces it back to the Early Corinthian period, to *NC.*, nos. 700–3. There is a most convincing connection with *NC.*, no. 700 (pl. 22, 5), one not so close, it seems on nearer examination, with no. 701 (pl. 22, 4), since the slender proportions are not apparent in this example.[8] There are, nevertheless, certain characteristics which connect these vases, *i.e.*, neatness, tidiness (even when the filling is thick), restraint and great care in the incision of detail (cf. *NC.*, pl. 22, 4, and especially *CVA France* VI, pl. 11, 4–8), which would seem to go back to the style of the Painter of Vatican 73,[9] whose sphinxes, at any rate, show something of the same neat and slender style. The main characteristics of the Corinthian portion of this development (as is clear from a number of allied groups) is the survival of the Protocorinthian tradition of neat forms and accurate detail;[10] the slender character is not always apparent. Some representatives of this style, in view of the small-scale drawing and fine neat incision, may be described as being in ‘ miniature ’ style, though this is sometimes not so very neat. This is not to suggest, however, a comparison with the Protocorinthian miniature figure style, which, if it survives at all in Corinthian, appears in such vases as *Corinth VII*, i, pl. 25, 185, and in some Perachora examples. The pottery from Perachora also contains representatives of a rough miniature style, connected, oddly enough, by some fragments with palmette-nosed animals, with the Mykonos Group and quite a different style of drawing.

Another fine, neat, and carefully incised style, but heavier, is that of the Sphinx Painter,[11] who represents a heavier type than the Painter of Vatican 73, and stands closer to the bulk of Early and early Middle Corinthian.

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[7] *Ibid.*, 207–13.

[8] Payne, *NC.*, 296, thinks nos. 700–3 are possibly from the same workshop as the kotylai nos. 678–81, which, in turn, are connected with the late Transitional kotyle no. 189. Payne’s group *NC.*, nos. 700–3 has been criticised by Feytmans, *Les Vases grecs de la Bibliothèque Royale de Belgique*, 17, who asserts that the Louvre exx. differ from the Belgian in clay and glaze, as well as in style, and that *NC.*, no. 701 is definitely earlier than the other vases of this group. She also seems to have misunderstood Payne’s reference to the Leyden ex. *NC.*, no. 706, where the statement that it is ‘ of the same type ’ means of the same shape and general organisation of decoration, not of the same style. On the question of the other pots (correct Payne’s ‘MNC 167’ to ‘667’ and ‘L 159’ to ‘MNC 336’) it may be pointed out that it is expressly stated in *CVA* that both the Louvre exx. have the same clay. This means very little, as practical acquaintance with the Corinthian fabric should show, but Feytmans uses as an argument against the association of the Louvre and Brussels pots the different clay and glaze of the latter. Both the Louvre exx. are said to have been found at Corinth though acquired in different years. As Feytmans suggests, MNC 667 (*NC.*, no. 701) *might* be earlier; ‘ different ’ would be more correct; it is more careful and elaborate than the others, certainly not ‘raide et hiératique ’. On the other hand the Brussels ex. and MNC 336 seem very close, though not by the same hand, and so too the Brussels and New York exx. The order of development of style is: Louvre MNC 667, Louvre MNC 336, the Brussels ex., and finally the New York ex.

[9] *NC.*, 277–8, and pl. 11, 1.

[10] Cf. *NC.*, 20, on Late Protocorinthian.

[11] *NC.*, 31, n. 1; 278 (nos. 163–7); 286 (no. 459); 300 (no. 760); pl. 12 and pl. 21.

The ' heavy ' style is clearly represented among the diversity of Middle Corinthian by (i) the Scale-pattern Group, (ii) the group of Louvre E 565 and (iii) the Chimaera Group, all with heavy forms, bold incision and in some cases a strong taste for polychrome effects. The interconnections of (ii) and (iii) have been demonstrated by Payne and developed by Amyx,[12] who shows that there is a connection also between the f.b. aryballoi of the group of Louvre E 565 and the Panther-Bird Group and the White-Dot Style. All have the same broad decorative effect, though the detail is not always careful. The frequent use of white dots, as well as the heavy effect, connects the Sphinx Painter here. The same broad effect, coupled with extensive use of polychrome, appears on the earlier work of the Sphinx Painter, and on certain other Transitional vases.

Much inferior, for the most part, to the other groups of the ' heavy ' style is the Scale-pattern Group.[13] Payne [14] traces its style back to the Early Corinthian *NC.*, nos. 457–8, 719 A and 730, and connects these with the late Transitional olpai nos. 169–74. In the earlier stages the development runs parallel to that of the Sphinx Painter, cf. *NC.*, pl. 25, 2 (Sphinx Painter) with *ibid.*, 48, fig. 11 and pl. 20, 1–2 (forerunner of the Scale-pattern style).

Among the divisions of the ' heavy ' style must be mentioned the Mykonos Group, thus named by Payne from the lid in Mykonos (*Délos* XVII, pl. 63, 120 = *NC.*, 292, no. 662). Payne collected a group in this style (*NC.*, nos. 659–62); to his list may be added a lid in Rhodes (*Clara Rhodos* VI–VII, 115, fig. 128, a sporadic find) and fragments from Perachora of pyxis lids, of a concave pyxis, of an oinochoe and of a kotyle. Related, if not belonging to the group, is the lid *CVA Wien*, *Universität*, pl. 4, 6. Associated finds are lacking, except in the case of *NC.*, no. 660 in Syracuse, from tomb 309, for which Orsi ' implies a date *c.* 600 B.C.' (Payne). The group is probably somewhat earlier than this. The filling ornament is composed of dot-and-circle ' rosettes ', which are generally, though not always, early. Payne places the group among the Early Corinthian.[15] This may well be so in view of the appearance, among the Perachora pottery, of Transitional fragments with dot-rosettes and relatively limited incision (including ' palmette ' noses), which may be associated with the group, and can in turn be connected with the ' scrappy ' animal-frieze style (miniature type) of the Transitional period. The type of knob appearing on the lids is Early Corinthian. In some cases the circle of the dot-and-circle ‘ rosettes ’ seems to be formed of dots run together. As far as its relative position in Early Corinthian is concerned, the Mykonos Group somehow appears to be earlier than the concave-sided pyxis *NC.*, no. 658, belonging to Payne's ‘ group ’ 653–8,[16] which is also called Early Corinthian by Payne, though it has a less concave side than the usual EC pyxis, and seems fairly early in style. To the same style as *NC.*, no. 658, belong a Perachora lid fragment and the concave-sided pyxis *Délos* XVII, pl. 57, 117, which have animals with the same heavy forequarters and slender central parts of the body as the Mykonos Group, and the same dot-and-circle ‘ rosettes ’ and tongues around the knob of the lid. The Mykonos Group would appear to be best placed at the end of Transitional and the beginning of Early Corinthian. It is quite unlike any other group in the curious attitude of the lions, the low position of the incised outline of the shoulder complex, and the other interior details. It is interesting to note the considerable variation of quality between various representatives of the style, though all have the characteristic ‘ palmette ’ nose rendering.[17]

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[12] *Op cit.*, 216–20. Under *NC.*, 313, no. 1054, read ' 853 ' for ' 835 '.

[13] See Payne, *NC.*, 63–4, and Amyx, *op. cit.*, 221–3, where he points out that the Scale-pattern Group appears to be part of a larger vaguely related group.

[14] *NC.*, 64, 286 and 297.

[15] *NC.*, 292, nos. 659–62.

The remaining large group of Middle Corinthian vases, those painted by the Dodwell Painter and his followers, is not easy to trace back into Early Corinthian. The early style of the Dodwell Painter is dated by Payne *c.* 600 B.C., and before that date there is nothing which shows a very close resemblance to the easily recognisable style of the group. The double line in the shoulder complex, which is affected by the Dodwell Painter (cf. *NC.*, pl. 28, 1), is by no means confined to his group,[18] but among the earlier appearances of this rendering may be mentioned *CVA Louvre* VI, pl. 4. 6, 8, 9, 11, a ring-footed alabastron. This vase and another by the same hand, *CVA Louvre* VI, pl. 4. 7, 10, 12, 13, belonging to Payne's Early Corinthian group nos. 454–6 A, show a neat style with thick filling, which might have some faint connection with the Dodwell Painter's style, though the large type of animal is quite different. Much more likely as an Early Corinthian forerunner of the Dodwell Painter's style is the kotyle-pyxis, *CVA Musée Rodin*, pl. 5, 1–5, which could well be an earlier stage of *NC.*, no. 862 (pl. 28, 1). It shows the same rendering of the lion's tail passing inside the flank which appears also in the Dodwell Painter.[19] The earlier stages of the Dodwell Painter (whether the above are connected or not) seem to represent a reasonably good style (cf. *CVA Louvre* VI, pl. 7, 4–6) apart both from the earlier and less attenuated 'delicate' style and from the 'heavy' style. The later stages or followers of the same group, among the most unpleasant of late Middle Corinthian vases (*cf.* Amyx's 'Ampersand Painter', *NC.*, pl. 29, 7),[20] show a pronounced tendency to attenuation, perhaps, as Amyx suggests,[21] under the influence of the Delicate Style, which became supreme in late Middle Corinthian and Late Corinthian I.[22]

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[16] On this ‘ group ’, see p. 206 below.

[17] For the palmette rendering of the nose, *cf.* also the type E aryballos with lions, *CVA Hague* II, pl. 7, 5, not far from the Mykonos Group in style.

[18] The double line appears elsewhere in quite different styles, in *NC.*, no. 801, related to the Chimaera Group, in Bonn inv. 845 (*AA* LI (1936), 358), and even in Attic under Corinthian influence; cf. *AA* XLIX (1934), 207, fig. 7.

[19] Cf. *NC.*, no. 1114 (*CVA Cambridge* I, pl. 5, 17), though this again appears elsewhere, *cf.* the pointed aryballos *NC.*, no. 57 (pl. 12, 2), pl. 23, 4, and fig. 140 *bis*; also in Chalcidian, *cf.* Rumpf, *Chalkidische Vasen*, pl. LXXXIX, 49 and LXXXIV, 50.

These are the main divisions of the Corinthian animal style. There are, however, quantities of Corinthian pottery falling between the 'heavy' and 'delicate' styles (cf. *CVA California*, pl. 6, 1). Indeed, any such division can be developed only with caution in view of the not infrequent combination of different styles on the same pot; *cf.* the krater *CVA Poland* I, pl. 7, 1*a–d*, and particularly the krater *CVA California* I, pl. 7, 1*a–e* (8/361), which seems to combine elements of the Gorgoneion Cup and Scale-pattern styles (see below, p. 250, on the California krater).

No archaeological discoveries since Payne wrote *Necrocorinthia* have invalidated his stylistic divisions of Corinthian. The more closely the Corinthian material is studied, the more apparent becomes the justice of his observations, with perhaps one exception, that for the most part the Chimaera Group and its related vases appear to be dated too late. This is a matter largely of relative, not absolute, chronology, so it may be discussed here. The pots involved are the Chimaera Group of plates (*NC.*, nos. 1040–52), the more elaborate plates *NC.*, nos. 1054–5 and the aryballos no. 853.[23] It does not seem reasonable to date the whole group to the same period 580–70 B.C., on the basis of the comparison of *NC.*, no. 1047 with the François Vase (dated by Payne in *NC.* 'early in the sixties'),[24] since this plate is obviously late in the group. In any case, the horse-protomes of the plate may also be compared with *NC.*, fig. 18 F (no. 1196) which Payne calls late, but puts in the Middle Corinthian class. If the plate in question could be dated *c.* 575 B.C. on this comparison, others should be placed well before the end of the first quarter of the century.[25] A fragmentary plate from Perachora bears a floral pattern closely resembling the style of some of the Chimaera Group plates. The head on the reverse seems fairly archaic, more so than *NC.*, pl. 35, 3, which Payne puts early in the sixth century. The obvious earlier affinities of the Chimaera Group in manner of drawing and use of enhancement would seem to be the style of the Gorgon-bird aryballos (*NC.*, fig. 12), and farther back still the style of the Transitional alabastra *NC.*, nos. 94 and 95 (pl. 16, 14 and 13), and there cannot be so great a distance of time between them. They all show the same elaborate polychrome system and fine bold incision. It would not be unreasonable to date some of the plates to *c.* 600 B.C.[26] It would then be unnecessary to say (as Payne, *NC.*, 64) that they correspond to the Attic ' of a rather earlier period '.[27]

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[20] The division of the groups with Dodwellian reminiscences into 'hands' is a chancy business. Amyx himself admits (*op. cit.*, 225) 'the whole body of later vases under the influence of the Dodwell Painter is remarkably lacking in distinctive character. There is often little to grasp in them other than the common derivation of their style. . . . Thus many later vases clearly showing dependence on his style are not easily attributable to any particular hand. A few pieces stand out enough to be assigned to some one artist, but in most specimens of the class it is hard to find the imprint of a personal style'.

[21] *Op. cit.*, 224–5.

[22] For survivals of the style of the Scale-pattern group and others of the 'heavy' category in LC I, see Amyx, *op. cit.*, 219 and 223. It would appear from *NS* 1936, 132–4, fig. 21 that pots (kotylai) decorated with animals in a very heavy style existed alongside the slender LC I style.

[23] The earlier but related group of f.b. aryballoi *NC.*, nos. 821–35, and the kraters related to these (nos. 1155–6, regarded by Payne as transitional from Early to Middle Corinthian), seem to be more reasonably dated.

[24] Dunbabin informs me that Payne finally dated the François Vase *c.* 570 B.C.; this does not affect the general criticism.

Chronology.

The establishment of definite dates for the successive stages of Corinthian seems to be attended with more difficulty.[28] Payne, using the material available up to 1931, worked out an absolute chronology which has found general acceptance. Corinthian has thus become the main instrument in dating fabrics such as Lakonian and Fikellura, and holds a place of prime importance in discussions of the chronology of earlier Attic and East Greek pottery. Of late, however, there has not been lacking a tendency to regard Payne's dating as too high, and attempts have been made to bring it farther down into the sixth century, especially in relation to Attic.[29] It will therefore be of some profit to consider the evidence which has come to light since the publication of *Necrocorinthia* in 1931, and its value for chronology. Here

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[25] Note that the horses of *NC.*, no. 1052 seem certainly to be earlier. The Gorgoneion also seems earlier than the type of the Gorgoneion cups.

[26] There also appears to be a close resemblance between the Chimaera Group and some examples of the early Middle Corinthian ' heavy ' style; cf. *CVA Louvre* VI, pl. 8, 1 with *CVA California* I, pl. 9, 1 a (Middle Corinthian heavy style, but not late).

[27] By this Payne means the Gorgon Painter, and such works of his as the amphora Louvre E 817 (Pfuhl, 93); he compares *NC.*, no. 1041 (*CVA Louvre* VI, pl. 8, 1–4) with *NC.*, fig. 87 (from the Louvre amphora). Payne dates the amphora about 590–85 B.C. (cf. *NC.*, 344 and 346: ' certain very early features '), a little later than the Louvre dinos, but in view of the fact that it is now clear from the Vari finds that Protoattic is not backward in comparison with Protocorinthian and Corinthian (*i.e.*, J. M. Cook, *BSA* XXXV, 200, proposes to date the Nessos amphora *c.* 625 B.C., as against Payne's former 615–10 B.C.), perhaps the amphora should go back to *c.* 600 B.C. In any case Louvre E 817 is little removed in shape from Athens CC 661 (*JdI* 1914, 221, fig. 15), which Payne dated *c.* 600 B.C. For the Gorgon Painter, see *AM* LXII (1937), 120 ff., where Karouzou identifies him with the early work of Sophilos. But see also Beazley, in *Hesperia* XIII, 39, who prefers to keep the two painters distinct. It is suggested, *AA* 1940, 134, that Sophilos was a pupil in the workshop of the Nessos Painter. A very doubtful matter.

The Chimaera Group and the Samos Kotyle Group seem to be regarded as more or less contemporary by Payne; the plates ' little before 575 B.C.'; the Samos Group 585–75 B.C. It seems odd, therefore, that the plates should resemble the *earlier* Gorgon Painter, while the kotylai (*cf.* especially *NC.*, pl. 33, 8, which shows the nearest in Corinthian to the Attic ' flame ' mane) correspond to the *contemporary* Attic Comast Group (cf. *NC.*, pl. 52, 2–3, Beazley's KX Painter), a later development in Attica from the Gorgon Painter.

[28] The difficulties of archaeological dating are well outlined by A. R. Burn, *JHS* LV (1935), 134–5, especially the lack of an outside ' control '.

[29] *Cf.* R. S. Young's remarks, *AJA* XLVI (1942), 23, n. 6.

Corinthian b.f. vases (animal and figure styles including the polychrome style) alone come under consideration, from Transitional to Late Corinthian I and II. Obviously the recent tendency to a later dating of Protocorinthian [30] is in part involved, but a discussion of this question can hardly be included in the scope of the present work.

Since 1930 the progress of excavation has increased the volume of Corinthian pottery to a very great extent, particularly on the three sites mentioned by Payne in his Introduction to *Necrocorinthia* (pp. viii–x), that is, at Perachora, Aegina and Corinth. The pottery from the sanctuary of Hera Akraia at Perachora has been published in *Perachora* I (1940), the value of the Agora South-East closed deposit for the chronology of the period 630–600 B.C. being outlined there (pp. 98–9). The pottery from the sanctuary of Hera Limenia is to be published in the near future in *Perachora* II. With isolated exceptions the great quantity of Corinthian pottery from Aegina, and the extensive finds from the Kerameikos and the North Cemetery at Corinth, still await publication.[31] The North Cemetery graves, when published, should be of first-class importance for chronology. Fortunately Payne had the opportunity of studying many of these when preparing *Necrocorinthia*. The more recent publication of Corinthian pottery from the site of ancient Corinth, mostly sporadic finds and well groups, by Weinberg in *Corinth VII*, i, has been used in the present catalogue, and goes some way to repairing the previous deficiency, but leaves the finds from the Kerameikos and the North Cemetery untouched.[32]

As far as volume is concerned, the Corinthian pottery from Rhitsona in Boeotia, now well published, is of considerable importance.[33] Yet what is needed is more information on the larger and more finely decorated Corinthian vases, in chronological relation to Attic, and this Rhitsona cannot give. Of first-class importance from this standpoint are the finds from the 'Opferrinnen' and graves of the seventh century in the Athenian Kerameikos,[34] on which

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[30] *Cf.* A. R. Burn, *JHS* LV (1935), 145.

[31] A few pieces are published (Protocorinthian only) in Welter, *Aigina*. The Protocorinthian and Corinthian fragments from the 'Aegina Find' (bought 'before 1916 in the Athens "Kunsthandel"' and passed in 1936 from private ownership to the Berlin Coll.) are still not published. See *CVA Deutschland* II, Berlin I, p. 5. For the publication of the Kerameikos and North Cemetery material at Corinth, see the references in *Necrocorinthia*, p. ix, and the following: *Art and Archaeology*, April 1931, 224 ff., and *AJA* 1930, 541 ff., both relating to the North Cemetery. *AJA* 1931, 1 ff., Newhall, 'The Corinthian Kerameikos', is the only publication of finds from this area. A few vases are illustrated figs. 7–13, and a fine LC I polychrome style fragment, p. 10, fig. 5; this style is otherwise scarce. Most interesting is the kotyle fragment, p. 9, fig. 4, which seems to be a trial piece by an apprentice painter. It should be noted that it is stated by Newhall that little chronological evidence is to be obtained from the Kerameikos (*loc. cit.*, 10), and there are gaps in the sequence of styles (*ibid.*, 29).

[32] Weinberg, in the Preface to *Corinth VII*, i, p. v, also mentions 'two large and important' well groups found in 1940, the study of which was prevented by the war. These are now published in *Hesperia* XVII (1948), 197 ff. For comment on one of these well groups see the note at the end of this article.

[33] To the publications of the Rhitsona finds available to Payne (*JHS* 1910; *BSA* 1907/8) is added Ure's *Aryballoi and Figurines from Rhitsona* (1934), a careful and detailed study of some minor categories of vases (alabastra, aryballoi, etc.). Divergences from Payne's datings are not so great as they would appear to be at first sight; see below, under 'Aryballoi'.

[34] *AA* 1933, 262 ff.; 1934, 196 ff.; 1940, 309 ff.

Payne commented as follows: '. . . the seventh century graves contain a whole series of Protocorinthian and Corinthian vases, which fix beyond dispute the relative chronology of the Attic and Corinthian fabrics. . . . The seventh century graves as a whole illustrate very clearly the parallel development of Protocorinthian and Protoattic art, and shew some curious attempts on the part of Attic artists to imitate Protocorinthian miniature work'.[35] The further study of these finds, together with the earlier and later Vari finds,[36] should go a long way towards settling the vexed question of the relation of Corinthian and Attic vase-painting in the period 650–575 B.C., and the chronology of the latter. Though it is realised that the finds have a direct bearing on the chronology of Corinthian also, the material is too little published to be considered here.[37]

A major excavation or series of excavations in Rhodes has been published, since the appearance of *Necrocorinthia*, in *Clara Rhodos* (III, IV, VI–VII, VIII) by Jacopi and Laurenzi.[38] The Rhodian graves containing Corinthian and other fabrics appear at first sight to give, through the richness of their contents, chronological data of the first importance for the dating of Corinthian, the various East Greek 'wild-goat' styles, Fikellura and Laconian. Here, however, Corinthian and Attic are the dating agents for the other fabrics, and are thus generally used,[39] though with some qualification and variation of opinion. Various scholars appear to use the Corinthian in these graves for chronological purposes with too little regard for the general conditions prevailing in the cemeteries. It is abundantly clear that grave groups have been disturbed by water and other natural agencies, that some have been used twice with a varying interval between the two burials,[40] that they have often been plundered, and that in any chronological reckoning the survival of vases over a considerable period must be envisaged,[41] rendering unjustifiable any attempts at a close and detailed dating of one fabric by another. This is particularly apparent in the case of Middle and Late Corinthian.[42] In addition, it would appear that not all periods are fully represented,[43]

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[35] *JHS* LIII (1933), 272; *JHS* LIV (1934), 188.

Very interesting also in *AA* 1934, 203–7 are the striking Attic imitations of Corinthian, especially p. 206, fig. 6, the fragment of a kotyle with swans and confronted polos-wearing sphinxes, with incised rosette filling, a seeming forerunner of the Polos style; *ibid.*, 207, fig. 7, broad ovoid aryballos, with angular ring foot, with boar and lion in a heavy style not very different from certain Transitional and Early Corinthian types (Kübler, *loc. cit.*, dates it in the late seventh century).

[36] *JHS* LV (1935), 154; LVI (1936), 143; LVII (1937), 125; *cf.* also *BSA* XXXV, 200. A few pieces are published by Karouzou in *AM* LXII (1937), pls. 43 and 44; further examples in *AA* 1939, 224–5; 1940, 126–134, especially figs. 6 and 8; *BCH* LXI (1937), pls. 33–4 and p. 451; LXII (1938), pls. 45–6; LXIII (1939), pls. 49–51.

[37] There has also been a recent very useful republication of the graves from the Phaleron cemetery, by R. S. Young, in *AJA* XLVI (1942), 23 ff., with a discussion of the small PC/Cor. vases occurring there and the contemporary Attic associated with them.

[38] The Danish excavations at Lindos (Blinkenberg, *Lindos*, 1931) are of very small importance from this standpoint.

[39] As in the case of Crete, where a surprisingly limited amount of Corinthian has been found. *Cf.* the extensive cemetery at Arkades, where the Corinthian is limited to single vases in a few of the graves (*Annuario* X–XII). The shapes are mainly aryballoi and alabastra. The latest are the quatrefoil aryballoi of pithos grave 81 (fig. 153) and 104 (fig. 164). The rest are EC/early MC. There are only two larger vases, the jug with trefoil mouth and small bottom in pithos grave 24 (fig. 78 and pl. XIV) of a peculiar shape, with rather rough EC animal frieze (if it is Corinthian) and a fine black-polychrome jug in shape half-way between a broad-bottomed oinochoe and a conical oinochoe (PC ?). It seems to be regarded as Cretan by D. Levi in *Hesperia* XIV, pl. 13, 4, as do a 'football' aryballos (*ibid.*, pithos 110, pl. 19, 7) and an Early Corinthian alabastron (*ibid.*, pithos 60, pl. 19, 9).

[40] *Clara Rhodos* IV, Makri Langoni, gr. 10: small type A alabastron (cocks) with a Fikellura amphora (inv. 12197; R. M. Cook, *BSA* XXXIV, Würzburg Group, 8) and Attic b.f. Cook dates the grave contents mainly to 540–20 B.C., and suggests two burials to account for the Corinthian alabastron (*op. cit.*, 26, note). It can hardly be a survival. It is perhaps an

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intrusion from another burial, like the kotyle fragment *ibid.*, gr. 8, with running dog (inv. 12180, p. 69, fig. 44) found with Attic b.f. and black-glaze ware. This kotyle is certainly of the early type, not of the later type which occurs, *e.g.*, in the Middle Corinthian well-group at Corinth (*Corinth VII*, i, pl. 42, 341). Langlotz very wrongly uses it (*Gnomon* X (1934), 419–20) as an argument for the long continuance in production of the subgeometric type. *Ibid.*, gr. 12: Transitional (dot-and-circle filling) olpe, with b.f. ware of the end of the sixth century. Possibly a survival (as it is one of the larger shapes), but the period involved is very considerable, far greater than in the case of *ibid.*, gr. 6, containing a Fikellura amphora and a r.f. hydria dated in the 'sixties of the fifth century (see Jacobsthal, *GGA* 1933, 8). Something of the same distance of time appears in the 'group' quoted by Payne, *NC.*, 289, under no. 555. *Clara Rhodos* VI–VII, Papatislures, gr. 2: Corinthian alabastron (inv. 13672, figs. 5 and 6 and pl. I) of MC style, and Laconian II cup (Lane, *BSA* XXXIV, 180; *cf.* the similar groups at Taranto there cited, p. 122) with what seems to be a fine Attic black-glaze cup (inv. 13677), in an apparently undisturbed *tomba a camera* (there was penetration from *ibid.*, gr. 1, and earth made its way into the tomb, but the cup can hardly have got in in this manner). The two skeletons, quite apart from anything else, make clear a case of two burials.

[41] That vases and even parts of vases were carefully preserved is clear from the case of the lids *Clara Rhodos* III, gr. 45, 40 (Corinthian ?), and gr. 46, 14. There is no trace in the graves of the pyxides to which they might belong. The oinochoai lids *Clara Rhodos* IV, gr. 178, may have been used as small lamps; here again the jugs are missing. For the question of survival over a long period, see also Homann-Wedeking, *Archaische Vasenornamentik*, 69.

[42] Cf. *Clara Rhodos* VI–VII, Papatislures, gr. 5 (fig. 21): Corinthian convex-sided pyxis and lid (inv. 13697, figs. 21 and 28), probably late MC rather than LC I, as Cook would have it (*op. cit.*, 33), and fragments of what appears to be a black-polychrome small-bottomed oinochoe, found with Fikellura amphorae (inv. 13692, Cook, p. 25, no. 6 and inv. 13693, Cook, p. 32, no. 13) and two late Attic continuous curve cups with b.f. palmette bands (inv. 13695 and 13696). There were probably two burials, as the Attic cups make clear; but in their absence the Fikellura might well have been dated too early, unless other examples of the same group corrected the impression obtained from this grave group. Cf. *Clara Rhodos* IV, Makri Langoni, gr. 9: Corinthian oinochoe (4; inv. 12193) with trefoil mouth and neck of a form similar to *NC.*, no. 1392, and body of a more ovoid shape; decoration black glaze and narrow purple bands. It was found with Fikellura (Cook, *op. cit.*, 30, no. 1) and late Attic b.f. It is true that such Corinthian ware continues well into the second half of the sixth century, but it starts in LC I or even earlier. The grave is disturbed; there may be two burials; to which groups does the Fikellura belong? The clearest example of the uncertainty which can arise from the chronological use of the *Clara Rhodos* Corinthian is given by *Clara Rhodos* IV, gr. 192: late warrior aryballos, found with a fragmentary Fikellura amphora (Cook, *op. cit.*, 42, no. 1) of group T, the only dateable example in the group. Cook says (*op. cit.*, 43): 'these vases date around the middle of the century'. This is true, but they can also be earlier (Ure, *Aryballoi and Figurines*, 23, considers it unlikely that they continued much later than 570 B.C.), and on this basis so could the Fikellura, though Cook prefers to date the group to which it belongs a little later than the Lion and Mykonos Groups.

[43] There appears to be a good deal in R. M. Cook's view (*BSA* XXXIV, 88) that at Kamiros 'the largest cemetery, that at Makri Langoni . . . seems to have been neglected for over half a century, and to have become popular once more about 540 B.C. when also some of the chamber tombs were reused'. Perhaps half a century is too long; about thirty years would seem to be a fair estimate. There is the same poor representation of later Corinthian at the other Kamiros cemeteries and at Ialysos. Vroulia (dwellings) does not go beyond the Middle Corinthian period to any considerable degree; later are only the late miniature kotyle, Kinch, pl. 28, 7, possibly some quatrefoil aryballos fragments, and the fragment of an Attic skyphos. The grave contents cover much the same period as the fragments found in the dwellings mentioned above; they tail off at the end of Early Corinthian. Vroulia appears to have been a very poverty-stricken place, however, and perhaps the conclusion is unfair. *Clara Rhodos* IV, Makri Langoni, gr. 178 is the only certain grave of the period 575–50 B.C., containing Corinthian but no Attic; possibles are gr. 204, and gr. 192; gr. 181, with a quatrefoil aryballos found outside the pithos, can hardly be counted; gr. 204 is an undisturbed chamber tomb. In *Clara Rhodos* III, gr. 5 the Corinthian vases 4, 5, 12, 13, 18 seem to form a homogeneous group of Middle Corinthian of before 575 B.C. (*cf.* the period of the Attic 'kothon', *ibid.*, figs. 16–17) which survived in use to the period 550–40 B.C., the time of the Eukheiros cup from the same area. In *Clara Rhodos* VIII, Marmaro 22 (*area di cremazione*) it is not clear whether the Corinthian fragments (fig. 132) are MC or LC I. *Ibid.*, gr. 2 (pp. 70 ff.) with fine-quality Laconian and Attic need not have been *buried* before 550–40 B.C., though some of the vases are earlier. *Clara Rhodos* IV, Makri Langoni, gr. 211, with a late MC oinochoe (figs. 413–14) and a kotyle (inv. 12569, p. 366) which sounds like one of the late miniature kotylai, may belong to the second half of the century, as may *ibid.*, gr. 121 (late warrior aryballos and black glaze cup). There is a fair quantity of Corinthian of LC I period from earlier excavations (cf. *NC.*, nos. 1204 and 1224 (alabastra); 1239, 1240, 1243 A, 1247, 1248, 1251, 1260 (aryballoi); 1351 (amphoriskos); 1379 (oinochoe); 1453 A (krater fragment)). The whole group

and thus arguments from the non-appearance of a fabric are not valid. In these circumstances the amount of information to be extracted from the grave groups is smaller than would appear at first sight; there are too many variables. Apart from this, the vexed question of the dating of the best (polychrome) figure style of LC I, or indeed of any figure style of Corinthian, is not solved, since the figure style is conspicuous by its absence.

One or two general observations can, however, be made with a fair appearance of justification. The criterion of the pointed aryballos, found so useful by Payne,[44] still appears to be applicable. In Rhodes this type appears to continue only into the earlier part of the Early Corinthian period (overlapping linear aryballoi and alabastra and some type A figured alabastra).[45] Even allowing for survivals, there seems to be a clear division between the graves containing pointed aryballoi and sometimes other Transitional, and the later graves. No evidence appears for Langlotz's view that Late Protocorinthian continued to the end of the seventh century. Furthermore, there are no examples of Protocorinthian and Corinthian occurring together,[46] other than such types as are mentioned by Payne. Apart from this, we should confine ourselves to the general observation that the appearances of Corinthian pottery are not inconsistent with Payne's chronology.[47] It may be pointed out here that the graves at Vroulia,

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(with the exception of the krater fragment) is of a poor quality, and taken with the Corinthian in the more recent Rhodian excavations it might seem to suggest a certain impoverishment in the period 575–50 B.C., yet the fine Attic vases and the Laconia hydria of *Clara Rhodos* VIII, Marmaro gr. 2 seem to contradict this view.

Here should be mentioned the theory of H. R. W. Smith ('The Hearst Hydria'; *Univ. of California Publications in Classical Archaeology*, vol. 1, no. 10, 1944), that Corinthian trade with Rhodes was cut by the Samian privateers about the end of the first quarter of the sixth century. The main archaeological basis of the suggestion is this same 'dearth' of Corinthian after 575 B.C. (see *op. cit.*, 256; 263–5), of which Smith says: 'Very striking in contrast with the quantity and quality of the Late Corinthian black-figure found in Italy and Sicily is the miserable yield of Corinthian vases of the same period from Rhodes'. This is true in part of the finds in the Italian excavations; not so true of the list in *Necrocorinthia*. In any case Smith's arguments are based on a comparison with the earlier periods, when, in his opinion, Rhodes was 'among the best customers' of Corinth. Even in the earlier periods, however, the contrast with Italy and Sicily holds good, and if Rhodes was among Corinth's best customers it was for the same types of pot, for the most part, as in the period 575–50 B.C., *i.e.*, aryballoi and small alabastra. The Siana grave-group with a very large number of vases, quoted by Smith, must have contained mainly aryballoi and alabastra, and is paralleled in the LC I period by *Clara Rhodos* IV, gr. 178 (fig. 346), which contains a large number of minor vases, apparently the collection of two lifetimes. Though other shapes appear these small vases predominate in the graves published in *Clara Rhodos* (the fine alabastron, *Clara Rhodos* III, gr. 45, pp. 72 ff., and that of *Clara Rhodos* VI–VII, Papatislures, gr. 2, figs. 5 and 6 and pl. I must not obscure this fact) and reference to *Necrocorinthia* will show that the same is true of the earlier finds from Rhodes. Payne's Catalogue contains vases of all periods from Rhodes, and though there are specimens of a fair number of shapes, small perfume vases predominate. Most striking is the dearth of the figure style proper, or of any quantity of vases which might be classed with it. There are two Chimaera Group plates (*NC.*, nos. 1040 and 1044), a Gorgoneion cup (no. 990) and fragments of three good kraters (two are MC and one is LC I). This is not very much in comparison with Western sites, and hardly enough to justify Smith's argument. It may be that Rhodes mainly imported small Corinthian vases which contained perfume, as seems to have been the case in Boeotia, where, at Rhitsona, enormous numbers of aryballoi have been found (*cf.* grave 51; *NC.*, 60) and little else. If this apparent predilection of the Rhodians be recognised, there will be less justification for believing that Corinthian imports fell off in the period 575–50 B.C.

[44] *NC.*, 21–27; 55 ff.

[45] In Rhitsona, however, graves containing pointed aryballoi (Ure, *Aryballoi and Figurines*, 22, pl. IX, graves 89 and 91) seem to show later Corinthian than in Rhodes.

[46] In *Clara Rhodos* IV, gr. 3, the late ovoid (LPC) aryballos 15 (fig. 21) hardly makes an exception.

[47] For the earlier group with pointed aryballoi, cf. *Clara Rhodos* III, Ialysos, gr. 3 (scale-pattern

published by Kinch (*Fouilles de Vroulia*), point to much the same conclusions.[48]

The Corinthian well-groups (*Corinth VII*, i, nos. 136–43; nos. 153–73; nos. 174–82; nos. 202–11; nos. 212–17; nos. 218–311) yielded a greater variety of Corinthian pottery, and seem to confirm Payne's relative datings.

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pointed); gr. 19 (scale-pattern pointed); gr. 29 (scale-pattern pointed and bird bowl); gr. 30 (pointed with scale-pattern and running dog between bands); gr. 35 (pointed with running dog between bands and dot-and-band); gr. 37 (running dog pointed and bird bowl); *Clara Rhodos* IV, Makri Langoni, gr. 3 (LPC and Transitional ware, with a pointed aryballos and three alabastra, one possibly Transitional, the others small EC type A); gr. 4 (small scale-pattern pointed, with a neat small f.b. aryballos with incised petals and verticals, an EC 'football' type (8, fig. 22)); gr. 15 (two scale-pattern pointed, with a 'Vroulia' cup as in gr. 3 (7)); *Clara Rhodos* VI–VII, Papatislures, gr. 12 (scale-pattern pointed; type A alabastron; bird bowl); gr. 13 (late Transitional alabastron; pointed aryballos; dot-and-band EC alabastron, and bird bowl); gr. 14 (*area di cremazione:* pointed aryballos with running dog, and bird bowl). Note that *ibid.*, gr. 11 (ovoid local (?) aryballos and pointed aryballos with running dog) appears to have been disturbed. In *Clara Rhodos* IV, gr. 209 the alabastron 4 (fig. 408) and the pointed aryballos 3 (fig. 408), with 'argilla rosea', may be local. *Clara Rhodos* III, gr. 3, with a pointed scale pattern aryballos, also contains a spherical aryballos with dot-and-band, and apparently two other aryballoi (1 and 2) of types also represented *ibid.*, graves 33, 45 and 46. The latter contain no pointed aryballoi, and seem to be of late EC–MC date. To the same period as these belong *Clara Rhodos* VI–VII, Papatislures, gr. 4, with a fine late EC or early MC alabastron (figs. 18–19), and *Clara Rhodos* VIII, Dafni, gr. 4. *Clara Rhodos* IV, gr. 178, unlike *Clara Rhodos* III, Ialysos, graves 33, 45 and 46, contains quatrefoil aryballoi, and a LC I cup, and is therefore considerably later (though the other aryballoi range from EC onwards), though it contains no Attic. Somewhat earlier, but probably not seventh century is *Clara Rhodos* VIII, Marmaro, gr. 1. Contemporary with *Clara Rhodos* III, graves 33, 45 and 46 would be *Clara Rhodos* IV, gr. 208 (two type A alabastra), gr. 210 (small kotyle with running dogs (the rays look fairly early) and three alabastra which may extend into MC), gr. 214 (polychrome 'football' aryballos; floral aryballos and neat EC alabastron), and *Clara Rhodos* VI–VII, Papatislures, gr. 6 (EC dot-and-band aryballos and EC type A alabastron). This last group may be a little earlier than the others mentioned. The grave group *Clara Rhodos* VI–VII, gr. 27, damaged by water and collapsed, may be dated to the late seventh century; in addition to a small kotyle with running dogs (fig. 91), a 'football' aryballos, a type B aryballos with padded dancers, and a small type A alabastron, it contains the fine plastic aryballos in the form of a squatting man (pl. IV, and figs. 97–8).

Clara Rhodos IV, Makri Langoni, gr. 5 (disturbed) is the solitary example of a grave group containing what appears on stylistic grounds to be Middle Corinthian, together with pointed aryballoi. The contents are: a small-bottomed oinochoe (inv. 12096), which is of early shape, but on stylistic grounds might be called early Middle Corinthian; a phiale mesomphalos (inv. 12098), Middle Corinthian, if not a Rhodian imitation, as Jacobsthal suggests (*GGA*, 1933, 8); fifteen alabastra decorated variously with bands, dot-and-band and scales; another alabastron (inv. 12132) of EC (?) date; three ovoid aryballoi (one, fig. 32), which may be local imitations such as occur at Vroulia; seven pointed aryballoi of different sizes, with scale pattern and petals or bands and petals. Though only one group of bones was found, there may well be two grave groups here. The Corinthian jug and phiale, the Samian bottle, the East Greek 'fruit-stand' (inv. 12100, Rumpf's 'Euphorbosgattung', *JdI* 1933, 81, IIIh 33) seem to form a later group. The ovoid aryballoi, the pointed aryballoi, the linear alabastra, the bird bowl and the East Greek jug (inv. 12097, Rumpf's 'Kamirosgattung', I 6) go well together to form an earlier group. The type A alabastron (inv. 12132) and the two East Greek cups might belong to either group. (*Note:* The cup type with offset rim and conical foot seems to cover a long period; cf. *Clara Rhodos* IV, gr. 3, which contains two examples of a shape much as Munich, *SH.*, pl. 18, 492, appearing with a Corinthian Transitional oinochoe (14), ovoid and pointed aryballoi (15 and 16) and EC alabastra. The same type (as Munich, *SH.*, 492) appears *ibid.*, gr. 208 (p. 364, fig. 407) in an EC/MC context. A type not very different also appears in gr. 121 at Makri Langoni (*Clara Rhodos* IV, 253, fig. 275) with a late warrior-frieze aryballos, and an Attic (?) black-glaze cup; in gr. 192 (fig. 374) with a late warrior-frieze aryballos and a fragmentary Fikellura amphora (Cook, *BSA* XXXIV, 42, no. 1); and in gr. 216 (p. 373, fig. 42) with an Attic b.f. cup (inv. 12584). Of the two examples in *Clara Rhodos* IV, Makri Langoni, gr. 5, one is of the type Munich, *SH.*, 492, and the other of a heavier type, as *SH.*, 485.)

[48] Payne (*NC.*, 26, n.) rejected the Vroulia graves as evidence for chronology. There is, however, something to be got from them, and they seem to form a parallel to the earlier graves published in *Clara Rhodos*. The number of cremations at each grave appears to have been determined by Kinch from the thickness of the layer of ashes (there are few remains of skeletons), as he infers in reference to grave 32. Whatever the number of cremations, something can be elicited from the succession of pottery (from the top of the layer of ashes downwards) in the burnt remains and in the curious pockets at the corners of the graves. Grave 2, containing the most Corinthian pottery, certainly shows earlier types at the lower levels, *i.e.*, there is a descending order from EC (or early MC) to LPC. In grave 2, except the pointed aryballos no. 9, the pointed aryballoi occur in the lower levels; dot-and-band alabastra occur more or less throughout, and the figured (animal style) Corinthian appears in the upper levels. Much the same is apparent in the other graves containing Corinthian.

Of the earlier groups, nos. 136–43 (containing the fine Late Protocorinthian olpe, no. 142, and a pointed aryballos, no. 143) produced no Corinthian. The group nos. 153–73 (with one pointed aryballos, no. 165) is perhaps a little later; it is interesting for the kotyle types, nos. 162–4 (see also *JHS* 1940, 17) with added white decoration on the black ground, silhouette, nos. 159–61, and coarse ware, nos. 170–1, 173. Of much the same period is the group nos. 174–82 (with similar kotylai, nos. 176–9), useful for dating the jug no. 181. The two groups nos. 202–11 and nos. 212–17 are definitely later. The black kotylai, nos. 214, 217, are later than the foregoing, to judge from the rays, and the subgeometric, nos. 208–10, though difficult to distinguish from the earlier in the frieze decoration, is definitely later in the subsidiary decoration. Of the vases in the incised animal style the jugs and fragments, nos. 204–6, are probably earlier than the aryballos no. 202 and the kothon no. 217. Some vases, at least, of the large well-group nos. 218–311 seem to be what is generally regarded as Middle Corinthian; the Late Protocorinthian frs. 218 appear to be an intrusion; the subgeometric kotyle no. 249 is apparently earlier than those of the previous group (see p. 185 on 'running dog' style); the appearance here of these is no argument for the continuance of the Protocorinthian style to the end of the century. The late-shaped kotylai nos. 260 and 277 appear to be Middle Corinthian. Among the polychrome kotylai, nos. 261–6, 273–5, which in form (less of a contrast in diameter between mouth and foot; more pronounced foot-ring) and decoration (greater use of polychrome) seem later than the preceding groups, a development can be traced from the earlier to the later form; *cf.* nos. 266, 265, 262 and 275, which represent in that order a gradual progress to the type of nos. 277 and 260. It is interesting to note that the rude blotchy style of nos. 252, 253, 254 and 257 may be quite early if the kotyle shape is any criterion;[49] contrast no. 251, which, with what seems a fairly neat early style of Early Corinthian, combines a shape tending to the later type (broader foot and straighter sides).

Nothing in the material reviewed above assists in the conversion of a relative to an absolute chronology. Here the position is much the same as it was in the period when Payne wrote *Necrocorinthia*. No new evidence of a surely dateable sort has come to light since. In his review of the available evidence Payne pointed out (*NC.*, 24–5) that there is little or no evidence to be got from Kamarina (founded 600 B.C.), and Akragas (founded 580 B.C.), and that is still true, as far as can be discovered, in 1947.[50] There remain Selinus (foundation date either 650/648 B.C. or 629/628 B.C.), Massilia (founded 600 B.C.), Smyrna (destroyed *c.* 590–85 B.C.), and Apollonia in Epirus (foundation date generally given as 588 B.C.).[51] Since the evidence from these sites is sometimes quoted as if it were in the highest degree decisive, it will be useful to give an account of it here. Leaving aside Selinus for the moment, it may be said at once that the other sites are not characterised by that abundance of Corinthian pottery which would justify definite conclusions. In the case of Massilia the fragments published by Vasseur,[52] and re-examined by Jacobsthal and Neuffer,[53] include one probable pre-colonisation import.[54] For the rest there is nothing which *must* be Early Corinthian or earlier. Most of the fragments are certainly Middle Corinthian and Late Corinthian I and II. The possible Early Corinthian fragments (Vasseur, pls. 6, 10; 10, 2; 11, 9) are all of types which might equally well belong to Middle Corinthian.[55] As far as it goes, the Corinthian pottery from Massilia provides contributory evidence for Payne's datings, but its limited quantity should always be borne in mind.

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[49] There seems some reason for believing that kotyle shapes are apt to be deceptive; cf. *Hesperia* I (1932), 70, a kotyle of seemingly early shape, with double rays, but in style probably not earlier than 600 B.C. See also J. K. Brock in the forthcoming publication of the Corinthian pottery from the sanctuary of Hera Limenia at Perachora (*Perachora* II), p. 218 below, section on kotylai, and the note, on a group of Corinthian and Attic pottery found in the Corinthian Agora, at the end of this article.

The evidence from Smyrna is very limited. A quantity of fragments has been published [56] from the ' Stadthügel ', of the Geometric period and onwards, but there is very little Corinthian; only two Protocorinthian linear style sherds,[57] the lower portion of a pointed aryballos with running dogs,[58] and what might be a fragment of a conical oinochoe with incised tongues on the shoulder.[59] To be sure, there is no post-590/585 B.C. Corinthian, but the total amount found is too small to justify any conclusions.[60] The new British excavations may afford fresh information.

The position in the case of Apollonia is not much better. The fragments from the Austrian excavations [61] are of very minor importance. They could certainly be post-588 B.C. on Payne's chronology, but they are in reality too small to merit attention. Somewhat more extensive are the necropolis finds,[62] but it would be hazardous to draw any conclusions from them, for, as Léon Rey points out,[63] the cemetery is a large one, and has suffered damage and robbery. Two pithos graves are reported, the first containing a number of Corinthian vases dating from late Middle Corinthian to Late Corinthian II.[64] No Attic b.f. appears with the Corinthian. Indeed, only one Attic b.f. pot, a late lekythos, has so far been found in the cemetery.[65]

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[50] The Corinthian in the Biscari Museum at Catania (mentioned by Payne, *NC.*, 25, n. 2) is poor and late. Apart from these, finds from Kamarina seem to have disappeared. There is no Corinthian from Agrigentum in Palermo. Some poor and late Middle and Late Corinthian can be seen in the Museo Civico in Agrigento, of the sort in keeping with Payne's chronology. See Dunbabin, *The Western Greeks*, 305 ff.

[51] There appears to be some uncertainty on the date; cf. *CAH* III, 553, n. 1, and H. R. W. Smith, *The Hearst Hydria*, 274, n. 98.

[52] *L'origine de Marseille* (1914).

[53] ' Gallia Graeca ', in *Préhistoire* 1933.

[54] Vasseur, pl. 5, 12: 'rebord d'une pyxide. Premier style; pourrait être protocorinthien.' *Cf.* the PC ovoid aryballos with bands and running dog (mentioned by Payne, *NC.*, 189, n.) in Hyères Museum from Olbia (*Gallia Graeca*, 40, fig. 40 *b*).

[55] To Vasseur's list of fragments from Marseilles Jacobsthal adds two more: a fragment of a LC I red-ground krater, and a fragment of a MC cup.

[56] *ÖJh* XXVII (1931/1932), Beibl., 127 ff. An extensive ' necropolis ' is mentioned also (126), but this appears to contain no vases of interest to the present problem.

[57] *Ibid.*, fig. 87, 15 and fig. 88; unless these are really ' eine Nachahmung rhodischer Erzeugnisse ', as Miltner calls them, *ibid.*, 177, under *c.*

[58] *Ibid.*, fig. 92, 16.

[59] *Ibid.*, fig. 92, 11.

[60] Note that fabrics later than 585 B.C., the date commonly given for its destruction, do occur on the site: Cook, *BSA* XXXIV, 89, n. 4 (Fikellura and Attic).

[61] *ÖJh* XI–XII (1922–4), Beibl., 23 ff., 33–4, fig. 8.

There remains Selinus, the centre point of Payne's chronology of Late Protocorinthian, Transitional and Early Corinthian. Payne concluded from the absence of Protocorinthian from Selinus (*NC.*, 24 ff.) that the Late Protocorinthian and probably for the most part the Transitional style were not current when the city was founded. This question will bear re-examination, since the Selinus-evidence is not so well understood as it should be. As far as the literary record of the foundation is concerned, there is little or no inclination at present to accept the earlier date, 650–49 B.C.; the later date, 629 B.C., given by Thucydides (probably on the authority of Antiochus of Syracuse or possibly Hellanicus) is generally accepted, though it need not be quite accurate to the year.[66]

The pottery comes from two sources: the shrine of Demeter Malophoros outside the city to the west, and the cemeteries excavated in the 'seventies and 'eighties of the last century. As will be seen from the publication of the temple excavations (*MA* XXXII, by E. Gàbrici; cf. *ibid.*, pl. II), there were two temple buildings, of which the first appears to have been quite small. There existed also close by in the same temenos a primitive altar, earlier, according to the excavator (*op. cit.*, 145–50), than the first megaron, and probably dating from the foundation of the city. The material excavated around the first megaron at the level of the foundations, and in the vicinity of the altar, seems to be the earliest from the site. It is of no high quality,[67] and a good deal is said to have perished 'through imperfect baking' and during the construction of the second megaron.[68]

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[62] *Albania*, 1932, no. 4, pp. 1–27.

[63] *Ibid.*, 27.

[64] That is what the kothon, *ibid.*, 16, could be, though it might be earlier.

[65] Naucratis, on account of the uncertainty of its foundation date, gives no evidence for the chronology of Corinthian. The date suggested by R. M. Cook (*JHS* LVII (1937), 235) is one determined by the pottery found there, *i.e.*, Attic and Corinthian of the end of the seventh century (*op. cit.*, 228 and *NC.*, 25), and East Greek seemingly not earlier than the end of the seventh century (Cook, p. 228). For the Corinthian, cf. *NC.*, no. 191 (one fragment of a kotyle with debased running dogs), 467, 467 A, 503 B, 718 (of these Payne, *NC.*, 25, seems to regard 191 and 503 B as dating before 600 B.C.). There are no pointed aryballoi (see note preceding *NC.*, no. 478). The early (?) Transitional fragment (Payne, *NC.*, 340; Boston (Fairbanks), pl. 37, 340) is a very doubtful piece of evidence, as Cook points out. There is no Corinthian at Tell Defenneh; this is probably fortuitous; the earliest sherds date 570–60 B.C. They have no chronological value (cf. Cook, *op. cit.*, 236).

[66] As Atkinson would argue, *BSR* XIV, 134–6.

[67] Cf. *MA* XXXII, 313: 'nello strato piu basso del primo megaron non v'e traccia di grandi vasi corinzii e molto meno di quelli a figure humane'. For the objects found at the primitive altar, cf. *ibid.*, 149–50: 'modesto vasellame corinzio di importazione, oggettini di pastiglia egizia, di collanine con qualchi correnti di cristallo di rocca e simili'. Atkinson, *op. cit.*, 133–4 seems to suggest that this material is the same as that of graves 27 and 55. It is not clear on what evidence she makes this assumption. It may be noted here that it does not appear that all the material is published in *MA* XXXII (*cf.* p. 311).

[68] *MA* XXXII, 126.

In the Catalogue of *Necrocorinthia*, Payne lists a certain number of pieces from Selinus, mainly ‘ subgeometric ’ (it is not specified whether they come from graves or from the Malophoros temple), which, with one exception,[69] need not be earlier than about 615 B.C.[70] Of the same date appears to be the earliest pottery published in *MA* XXXII from the temple of Demeter Malophoros;[71] all the rest could be either very late Early Corinthian or Middle Corinthian.[72]

The same impression is got from the grave groups of the city cemeteries.[73] It may be observed here that an expert publication of these graves is long overdue,[74] though it must be admitted that confusion before, during and after excavation seems only too likely to have diminished their value. The Manicalunga graves appear to start later than those in the Galera necropolis, but in the latter, too, there is a diversity in date from the end of the seventh century onwards for a considerable period. Certain graves appear to have been used twice;[75] as Galera 31, 36, 39, 42. Grave 42, containing the earliest pots from the cemetery (see below), also contains two small late r.f. lekythoi. Corinthian pottery in the individual grave groups may range from late Early Corinthian to Late Corinthian. When Attic and Corinthian appear together, the Corinthian, or part of it, is generally late[76] and poor. There is a very considerable degree of similarity between the earlier Selinus graves and some of those in Rhodes, *e.g.* at Ialysos.[77] The earliest are perhaps a little later than the large Ialysos grave-groups of graves 33, 45 and 46. No pointed aryballoi or bird-bowls [78] occur in them. With the exception of the two Transitional kotylai of grave 42,[79] the earliest grave contents are late Early Corinthian. Oddly enough, there is no East Greek 'wild-goat' style pottery, even of the type with incised detail.

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[69] The alabastron *NC.*, no. 76 (Palermo 489), called late Transitional by Payne. Note that Johansen, *VS*, 89, mentions an ovoid aryballos in the Louvre from Selinus.

[70] A few pointed aryballoi of the type *NC.*, fig. 8 A; cf. *NC.*, pp. 23 and 286, under pointed aryballoi B; a few ‘ exceedingly debased ’ subgeometric kotylai as *NC.*, fig. 9 C; cf. *NC.*, 23 and no. 191; one or two linear cups of the type *NC.*, fig. 9 B.

[71] The Corinthian is commented on by Payne *NC.*, 339. Pl. 87, 1–2 and 4: EC alabastra; pl. 87, 9: kotyle with debased version of *NC.*, fig. 9 C.

[72] *MA* XXXII, fig. 134 *a–b*: krater fragments from the end of the EC period; pl. 86, 2: Early Corinthian or early Middle Corinthian; so also pl. 86, 3. All the aryballoi pl. 87, 5, 6, 7, 8, pl. 88, 3, 4 (*NC.*, no. 553), 6, 7 (*NC.*, no. 549), 12, could be very late EC or MC. The conical oinochoe pl. 87, 11, with rows of dots on the body (compared to the black-polychrome example *NC.*, no. 758), is called EC by Payne, but it could certainly be MC. To the above may be added the aryballoi *NC.*, nos. 550, 593 and 638, which also continue into the sixth century. The oinochoe fragment *NC.*, no. 743 is grouped with Early Corinthian, but may be later to judge from its position in Payne's catalogue. In effect there is nothing in this group which can be regarded with any assurance as early Early Corinthian or even Early Corinthian at all.

[73] Galera and Bagliazzo to the north of the city, and Manicalunga to the west near the temple of Demeter Malophoros.

[74] A small group, graves 27 and 55, were published in *BSR* XIV, 115 ff., where the pottery was all dated too early; *cf.* Amyx, *op. cit.*, 231, n. 103; Young, *AJA* XLVI (1942), 23, n. 6; *BSR* XVI, 19 ff. The author, in the same article, when discussing chronological difficulties, points out some of the weaknesses of the dating from Selinus.

[75] *Pace* Atkinson, *loc. cit.*, 129. We have a choice between this conclusion and the other, that the grave groups have been mixed by the excavator or since. It is hardly possible that later offerings were made at the graves.

[76] *Cf.* grave 37: late miniature kotylai with b.f. lekythoi with vertical palmettes; similar graves are 22, 43, 51 and 52. As Atkinson points out (*loc. cit.*, 116), the general quality of both Corinthian and Attic is poor, though there are exceptions such as grave 25 with an Attic lip-cup (Herakles and the Nemean Lion in the medallion) and a large MC alabastron, a combination very similar to that of *Clara Rhodos* III, Ialysos *area di cremazione* 5 (Middle Corinthian and a Eukheiros cup).

[77] Published in *Clara Rhodos* III. Other types of pottery also represented in the Selinus graves are: (1) ‘ Samian ’ bottles (*cf.* Boehlau, pl. VII) of red clay; cf. *Clara Rhodos* III, gr. 48, 1–2. (2) Long alabastra with grooves; cf. *Clara Rhodos* III, gr. 5, 6; gr. 33, 25; graves 45 and 46. (3) Bucchero kantharoi; cf. *Clara Rhodos*, gr. 2, 6 and 7 (fig. 6); same shape, though the Rhodian exx. are of ‘ argilla rossa ’. (4) Black and red cups with offset rim, much of the shape of Munich, *SH.*, 492; some of these may be imported, others Sicilian imitations; *cf.* in *Clara Rhodos* IV the

It is clear from Payne's account (*NC.*, 22–4) that he felt the difficulty of this gap between the foundation date of Selinus (629–28 B.C.) and practically the whole of the pottery found there,[80] and introduces extensive qualifications: 'We may take it that the finds from Selinus will not belong, at any rate in quantity, to the years before 625 B.C.; on the contrary, it is probable that the majority even of the earliest objects refer to a rather later date than that of the foundation. Relatively few of the graves will go back to the very first years of the city, and the shrine of Demeter Malophoros, which lies some little way from the acropolis, and in which quantities of vases and terracottas were found, is not likely to have been built at once. The last ten or fifteen years of the seventh century are therefore a probable date for the earliest vases from the site'. This is obviously an accommodation of the circumstances to the existing finds, and weakens the force of Payne's arguments. While a large temple may not date from the first years of the settlement, there is still the question of the primitive altar, and it is difficult to believe that no individuals died in the first years, even children, since

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examples mentioned in n. 47 above. (5) Black glaze amphoriskoi, with shoulder reserved in red; *cf.* Taranto, Contrada Vaccarella, gr. 43, *NS* 1936, 132–4 (with late MC/LC). (6) Lydia (East Greek). (7) Plastic vases, both Corinthian (hare, gr. 11) and East Greek (the fine griffon head, gr. 36; siren alabastron, gr. 51; alabastra with top in the form of a woman's head and shoulders, graves 22, 24 and 35); cf. *Clara Rhodos*, *passim*.

[78] Such as appear in the earlier contexts in Rhodes; cf. *Clara Rhodos* III, Ialysos, graves 19 and 37.

[79] The kotylai are in the silhouette style, with animals in the main frieze and subgeometric birds between upright wavy lines on the rim. These may be the examples referred to in *NC.*, under no. 191. It is possible that they are later than Transitional.

[80] This particularly obvious difficulty has not received the attention which might have been expected from those who would date Corinthian pottery in general later than Payne. To be sure, Byvanck (*Mnemosyne* 1936–7, 205) expresses certain misgivings (comparing the earliest finds at Selinus with the latest from Old Smyrna, and suggesting that either the Thucydidean foundation date of Selinus is too high or the known remains at Selinus do not cover the earliest period of the city), but his main criticism seems to be that the development of Late Protocorinthian is too compressed into the third quarter of the seventh century, and that the Chigi Jug cannot be dated much before 600 B.C. Langlotz (in his review of *Necrocorinthia* in *Gnomon* X (1934), 419–20) accepts the later foundation date of Selinus, but objects to Payne's dating on the grounds that (1) imports depend on the particular trade relations of a State at a given time; (2) the Late Protocorinthian fabric may have been completely destroyed in Selinus; (3) if pottery dates are to be deduced from the foundation date, what of the dedalic marble heads (lamp fragments, republished in *JHS* LX (1940), 23–7), which are to be dated on stylistic grounds to *c.* 650 B.C.? (4) In the latest Protocorinthian period, according to Langlotz, there was an increase in 'Massenware', so that factories must have worked 'protokorinthisch' into the early sixth century. (5) He also objects that Payne compresses Late Protocorinthian and Transitional too much into a period of ten to fifteen years each. The first of these objections is sufficiently answered in advance by Payne (*NC.*, 24). The third, on the dedalic lamps, Langlotz does not press, but admits that they may have been manufactured well before the foundation of the city. The relevance of the fourth point is difficult to see in the case of Selinus, where so little 'subgeometric' appears. The second objection cannot altogether be excluded, especially in view of the disappearance, more or less complete, of a fabric on other sites, *e.g.*, Corinthian from Kamarina and Akragas, into which cities it must have been imported; though it should be pointed out that Selinus has been far more extensively dug than Kamarina or Akragas. The objection to the 'compression' of Late Protocorinthian seems more relevant (it is the chief argument with Langlotz as with Byvanck), and is discussed in the text.

infantile mortality seems always to have been high.[81] It seems better to assume that the earliest dedications have disappeared to a considerable degree during the construction of the first and second megara,[82] and that the earliest graves have not been found, or have long since been dispersed.[83] This seems the only solution of the dilemma, since the meagre remains of Transitional and earlier Early Corinthian from the site cannot represent what the colonists, even if few in numbers and poor, brought with them to the colony, while the reduction of the founding date would be too drastic. The earlier dating of the grave contents is quite excluded by the evidence from elsewhere.

In view of all this, it seems possible to make somewhat wider the limits of date within which the Transitional style may have passed into Early Corinthian. It might be possible to set the beginning of Early Corinthian at 620 B.C. or even 615 B.C., and its end at 590 B.C.,[84] since the finds at Selinus do not give us grounds for a more precise dating than this. If this dating is adopted more time is allowed for the development of Late Protocorinthian, say 650–30 B.C. Transitional does not require a long period, as it is not a stage represented by any very great volume of pottery, *e.g.*, at Perachora. This modification should satisfy the criticism of excessive compression of Late Protocorinthian levelled against Payne's chronology, but it can go no farther [85] without running contrary to the general evidence of earlier grave groups found in Rhodes and elsewhere, and involving the whole question of Corinthian–Attic chronology in the sixth century.

In this connection the question arises of the overlap of Corinthian in its later stages with Attic, which eventually replaced it. Payne, having obtained his one fixed absolute date from Selinus, then elaborated the chronology of Corinthian pottery on a stylistic basis (with a certain assistance from the earlier graves containing his subgeometric types), and by a comparison especially of Middle and Late Corinthian with Attic vase-painting. The difficulty of dating Middle Corinthian is emphasised by Payne (*NC.*, 58), particularly in the question of the dividing line between Early and Middle Corinthian. The key points of Payne's chronology of Middle Corinthian are dealt with in *NC.*, 60 and 62. They are: comparisons of shapes of vases and renderings of detail with Attic, and the comparison of plastic pyxis handles with other work of what seems to be much the same period.[86] In this fashion compact groups are formed, but the absolute date depends to a large extent on the dating of Attic,[87] and it is clearly very difficult to decide what is ' contemporary ' Attic, and the degree of contemporaneity of similar forms in each fabric. This is the real weakness of Payne's chronology,[88] and yet it seems to fit in outstandingly well with general developments in the sixth century, and that is the real test. He applies the same criteria (*NC.*, 60) to some of the Rhitsona graves, dated by Attic or imitations to 575–50 B.C., and to the red-ground vases.[89]

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[81] *Cf.* at Vroulia, where there seems to be quite a number covering a relatively short period. As far as adults are concerned, a peaceful settlement would produce few early graves; opposition from the natives the reverse. It seems to be very difficult to decide which would have been the case at Selinus. Atkinson (*BSR* XIV, 131–3) appears to accept a preliminary settlement (for which she produces no evidence. Mr. T. J. Dunbabin points out to me that there is archaeological evidence of preliminary settlement at almost every Sicilian colony which has been explored, except Selinus, which seems to have been founded 'out of the blue') and treating with the natives (p. 131), a recollection of which, in her opinion, gave rise to the earlier foundation date (650 B.C.), and (p. 133) a 'final settlement' unlikely to have been achieved without considerable bloodshed. The preliminary settlement would have been carried out, she thinks, by a mere handful, the final settlement by a greater number; '. . . and for this reason, as well as from the probability that the earlier settlers were already advanced in years when the colony was officially founded, there is no need to date the earliest Greek tombs at Selinus, even though they are numerous, much if any later than the final foundation of the city'. The grave contents are dated accordingly, and what Payne dates *c.* 615 B.C. she appears to date 625 B.C., with the observation (p. 131) that: 'it seems to follow that fine and debased examples, full-sized and miniature vases, were produced at the same period', presumably to explain the absence of Payne's earlier Corinthian types.

[82] More likely than through the 'imperfect baking' mentioned in *MA* XXXII, 126.

[83] Despite Payne's contention, *NC.*, 24, that Selinus has been widely explored, there appears to be a suggestion in *MA* XXXII, 7–8 that other burial areas remain to be explored to the west of the city.

[84] An end-date for Early Corinthian *c.* 590 B.C. is suggested by Payne (*NC.*, 57) as a possible modification of his chronology, and would not be out of keeping with the evidence from Massilia.

[85] As, for example, Byvanck's reaffirmation (*Mnemosyne* IV, 205), of the old view: 'Die Chigi Kanne wird man kaum viel vor 600 v. Chr. datieren'.

It is here that the chief criticism has arisen, *e.g.*, from Langlotz,[90] largely from the ultimate desire for a much later dating of Protocorinthian, and apparently of Attic [91] if his dating of the François Vase is to be taken as a part of a later dating of the whole of Attic. Langlotz asserts [92] that the ' archaising ' forms of ' Massenware ' have led Payne to date Corinthian pottery too early, and that only pots of the most outstanding quality are relevant for stylistic development and comparison with Attic.[93] The

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[86] Note the process: the cups (*NC.*, nos. 986 ff.) are compared with similar Attic types; with the cups (pl. 32, 1–2, 5) are compared the kotylai *NC.*, nos. 950 ff. (one from Samos, gr. 21), the krater fragment no. 1195 (pl. 33, 6) and other vases of which the date is given as *c.* 585–75 B.C. With a related group of cups (*NC.*, nos. 975–6) is connected the pyxis *NC.*, no. 882, with plastic heads which seem to fit well in with Payne's series of plastic heads (*cf.* p. 235) and afford not independent but confirmatory evidence of the fact that the cups *NC.*, nos. 975–6 are slightly earlier than the Gorgoneion group. The Samos grave also afforded other vases (see *NC.*, 62 and Boehlau, pl. IV, 2 and 3; pl. V, 1 and 3) taken to be of much the same period. There is a certain weakness of argument here; the plate *NC.*, no. 1034 is said to have the same patterns as the Chimaera Group (these patterns are merely concentric bands), which is dated by comparison to the François Vase to *c.* 580–70 B.C.

[87] Cf. *NC.*, 61: ' The most useful criterion for the chronology of this period is the standard given by contemporary Attic '.

[88] An attempt has been made above to show that a largish group (the Chimaera Group) cannot be dated as a whole by the comparison of part of it to one particular part of Attic.

[89] *NC.*, 60; and cf. *ibid.*, 70 (and pl. 37, 3) on the Lydos lion-type in LC I.

[90] *Gnomon* X (1934); though he seems to use Payne's chronology in his Catalogue of the Martin von Wagner Museum at Würzburg.

[91] Langlotz, *loc. cit.*, 426 dates the François Vase in the ' early period of the tyrants ', and suggests a comparison of the Nessos Amphora with the Deianeira lekythos, and of the Gorgon deinos in the Louvre with the Nearchos aryballos. As far as can be seen, this system of dating is quite untenable, though the stylistic basis of the dating of Attic allows a certain margin for dispute.

[92] *Loc. cit.*, 421.

[93] He would institute comparisons with very late seventh- and early sixth-century works of sculpture (*op. cit.*, 421–2) to date Early Corinthian vase painting from 600 B.C. (this means the figure style), observing: ' Eindeutige Beweise gibt es noch nicht, aber der Aufschwung innerhalb der korinthischen Keramik, das Entstehen neuer Gefässformen, die neue Erzählerlust und der monumentalere, weil plastischer gesehene Figurenstil scheint mir ebenso wie in Athen auf die Wendezeit nach 600, die Zeit der Sieben Weisen hinzudeuten '. This view seems largely to have been rebutted by the Vari finds. Comparisons with

Eurytios krater he would compare with the best Tyrrhenian vase-paintings or with the Marriage of Peleus and Thetis on the fragments of the Acropolis lebes by Sophilos; the Marriage of Paris and Helen (*NC.*, no. 1187; pl. 33, 5) with the François Vase;[94] *NC.*, pl. 39, 1–2 and fig. 38 with 'ripe' Exekias; pl. 41, 2 with the Siphnian frieze. He maintains in opposition to Payne's comparison of Late Corinthian polychromy with Sophilos that this style is later, the Corinthian counterblast to the Attic development of fold rendering.[95] It is obvious that a great deal of this is based on subjective arguments which might be prolonged indefinitely. Some series of graves is still required to demonstrate what is contemporary in Attic with the best figure style of Corinthian, and to give a final settlement of this problem, and such a series of graves is conspicuously lacking. It may here be noted that a later chronology not greatly different from that of Langlotz is proposed by Kübler, who, on the strength of recent excavations in the Athenian Kerameikos, gives the following: Late Protocorinthian 650–25 B.C.; Transitional 625–10 B.C.; Early Corinthian 610–580 B.C.; Middle Corinthian 580–50 B.C.; and Late Corinthian I presumably after 550 B.C. Selinus itself affords no evidence to rebut a modified form of the earlier part of this dating, but it should also be pointed out that evidence of the sort produced by Kübler[96] is sometimes liable to more than one interpretation,[97] and unless a considerable amount of Corinthian pottery has been found on the site (and that of the best quality) with independently dateable Attic, any such new dating will require very sharp scrutiny before it is accepted. This is clear in view not only of the earlier evidence from the Kerameikos which seemed to support Payne's dating, but also of that from elsewhere which appears to indicate a cessation of Corinthian production *c.* 550 B.C. as far as the figure style and greater part of the animal style are concerned.

As observed above, Langlotz, in down-dating the finer Corinthian vases of the polychrome style, rejects the evidence of the inferior animal-frieze vases on the ground that they do not really reflect the development of style, but are 'archaising *Massenware*', and thus led Payne to too early dating in general. Such an argument can only be valid if the animal frieze can be separated entirely from the figure style, or if it can be shown that the figure

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sculpture at such an early period seem to be rather hazardous (*cf.* the comparisons instituted for a somewhat later period by Karouzou-Papaspyridi in *AM* LXII (1937), 124).

[94] A double lowering of its date in comparison with the chronology of Payne, who dates it before the Gorgoneion cups and Timonidas, and therefore ten to fifteen years before the François Vase, which, however, Langlotz dates *c.* 555–50 B.C.

[95] Cf. however, for fold rendering in Corinthian, *NC.*, 108 and no. 1410 and one or two fragments of Perachora Corinthian; unless indeed decorative fringes are here intended.

[96] I quote from a letter of Mr. T. J. Dunbabin, since this volume of *JdI* is not available to me. 'His ground is the succession of a number of grave monuments in the Kerameikos, each of which cuts into the one below, and is therefore later than it, and which cannot be compressed into the space of time allowed by Payne's chronology of the late seventh century'. See additional note at the end of this article, p. 254.

[97] As J. M. Cook has shown in *BSA* XXXV, 209.

style of a vase is progressive while the animal frieze below it is archaising.[98] This Langlotz makes no attempt to do, and indeed, while it may be conceded that there is a less striking development in animal frieze than in figure scenes in later Corinthian, there is a development in the animal-frieze style which is very apparent when elements of it are given more prominence than usual; *cf.* the amphora *NC.*, pl. 40, 1. It is not really possible to separate animal frieze and figure styles at any period in Corinthian. Elements of one constantly appear in the other, and both must in general be dated together, with the result that small vases or vases with figure decoration not of the first quality can reasonably be used for dating. Here the crux is the association of Attic and Corinthian in the same grave groups, and the point at which the figure and animal styles finally disappear.

Starting from the latest possible period, we may safely assert that the Corinthian animal and figure styles did not extend into the fifth century. The Conventionalising style, which was ascribed by Payne to the later sixth and early fifth centuries, is confirmed in this dating by a series of finds at Athens and Corinth.[99] For the second half of the sixth century the series of graves from the North Cemetery at Corinth is not yet published. Here, if anywhere, acceptable evidence should be found, if Langlotz' later dating is correct. Neither Rhodes nor Taranto has produced those major works of the potter's and painter's craft necessary to demonstrate beyond cavil the chronology of the best and most elaborate Corinthian relative to Attic. Apart, however, from the fact that vases of the first class are lacking in both sites, in the second half of the sixth century the predominance of Attic is not contested by a few of the inferior productions of Corinth, which Payne has assigned to the very last stage of Late Corinthian I and to the earlier Conventionalising style.[100] The same condition prevails in the graves at Monasteri near Perachora.[101]

In the second quarter of the sixth century the position of Rhodes is obscure, as has been seen above, and the special circumstances seeming to prevail there reduce the value of the evidence of the Rhodian graves, though nothing emerges from them to shake Payne's chronology.[102] Payne used Rhitsona grave 51 for this period (*NC.*, 60), but there is a good deal of material in Taranto, mostly unpublished, which also may be used here.[103] On this site a rich series of graves has been excavated at different times, which confirm Payne's chronology against the criticism of Langlotz, though the best polychrome style is again lacking. There is a sharp division between a large group of graves with Middle and Late Corinthian,[104] and another large group with Attic b.f. and no Corinthian except a few representatives of Late Corinthian II. The division seems to come about mid-century.[105] When Corinthian and Attic overlap, the latest Corinthian does not extend far into the second half of the century, as is clear from the independently-dated Attic,[106] though there are cases of lengthy survival.

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[98] For a real archaising style, *cf.* the Eleutherna bronze bands, *NC.*, 226 ff., in which, as Payne points out, the rendering of certain details makes the archaising character of the work clear.

[99] *Hesperia* VI (1936), 257 ff., Pease, 'A Well of the Late Fifth Century'; *Hesperia* VII (1937), 585, for a well group extending from mid-sixth century to 500/480 B.C.

[100] At Ialysos (*Clara Rhodos* III) Corinthian is mostly limited to the 'tombe arcaiche a cremazione'. In the 'tombe a inhumazione', which seem to date from the mid-sixth century, to judge from the Attic vases appearing in them, only LC II appears, as *e.g.*, in graves 148, 165, 172, 180, 224 and 232. The same is the case at Kamiros. Where Corinthian appears with Attic it is of that sort already ascribed by Payne to the latter half of the sixth century; cf. *Clara Rhodos* IV, graves 11, 13, 75, 113, 132, 133, 142, 162, 167; there are others of the same type. In the later excavations at Ialysos (1934; *Clara Rhodos* VIII), despite the considerable amount and excellence of the Attic (starting with Siana cups in Marmaro 2 and 23), there is no Corinthian associated with it (the East Greek 'wild-goat' style is equally lacking). The Corinthian all appears in the earlier graves with little or no Attic.

[101] *JHS* 1936, 144: 'The earliest material is Attic b.f., including Siana cups, with Late Corinthian, the last gasp of the animal-frieze style'.

It may fairly be concluded that nothing has been found since 1931 to upset Payne's general chronology, though a reservation must be made in connection with the most recent finds in the Athenian Kerameikos (n. 96 above), which require further examination based on fuller publication. A minor modification of the dates of Transitional and Early Corinthian is not excluded by the evidence of Selinus, but Late Corinthian I can hardly be pushed down beyond 550 B.C., and the Late Corinthian I polychrome vases cannot be separated from the other types (animal-frieze and minor-figure style).

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[102] This is emphasised again here because there is a tendency to attempt to extract too much from the Rhodian finds, as *e.g.*, in connection with the dating of Fikellura by Homann-Wedeking (*Archaische Vasenornamentik* (1938) and *AM* LXV (1940), 31 ff.), who bases close datings and detailed arguments on some of the Rhodian grave-groups in a manner which seems wholly unjustifiable. See also R. M. Cook's comment in *JHS* LVIII (1938), 266.

[103] The material was less extensively studied by Payne than that from Sicily (see *NC.*, 188), though a good deal of it was available before 1931. A fair amount has also been found since that date. The extensive finds at Corneto/Tarquinia, not so readily to be studied in grave groups, are also largely unpublished; the pottery from Caere and Vulci is for the most part dispersed.

[104] The most recent are published in *NS* 1936, 119 and 132–4. They contain no Attic.

[105] In keeping with the theory of H. R. W. Smith (*The Hearst Hydria*, 263) that the fall of the Cypselids (if this is to be placed *c.* 550 B.C.) was attended by a sharp fall or practical disappearance of Corinthian trade with Italy. Lane (*BSA* XXXIV, 150) points out the decline of Laconian after 550 B.C., on the removal of Corinthian inspiration, though this is not so telling in view of the dating of Laconian mainly by Corinthian.

[106] *Cf.* (1) Via Leonida, 8/4/24: large crude MC kotyle, LC I cup with griffon birds and eagles, and an Attic trefoil-mouthed panel olpe, of a date early in the second half of the sixth century.

(2) Via Leonida, 8/4/24: two crude MC kotylai and a linear amphoriskos, with Attic trefoil-mouthed olpe, in the panel of which a quadruple lotus-palmette of *c.* 550 B.C.

(3) Via Dante, 2/5/27: Corinthian red-ground pyxis with upright handles (horsemen on alternate black and white horses galloping to l.), with Attic b.f. continuous-profile amphora of *c.* 550 B.C.

(4) Contrada Madre Grazia, 27/7/20: Corinthian red-ground panel amphora: A. siren and cock, rosettes; B. two confronted female heads of LC I style; with an Attic ' C ' cup.

(5) Via Ramellini, 24/5/34: small amphora with lotus-palmette complex in panel, of inferior style wth coarse incision; may be Corinthian or an imitation; found with a latish band cup and a ' C ' cup. Published *NS* 1936, 183.

(6) Arsenal Excavations, 26/8/07, gr. 428: Corinthian ' white-style ' amphoriskos, Corinthian continuous-profile amphora (cock with white-dot enhancement, in panel; traces of red on surface) of late MC or LC I period, Corinthian pyxis with upright handles (tongues and lotus-palmette chain on body) of LC II style, and two Attic band cups, one with a nonsense (?) inscription, the other with a boar between panthers in neat ' Kleinmeister ' style.

(7) Contrada Santa Lucia, 8/11/24: material found outside the grave. Large LC II pyxis with upright handles, Corinthian fictile hare and LC aryballos, with Attic band-cups (i. Herakles and Triton; ii. Warrior combat) in ' Kleinmeister ' style.

For a somewhat earlier stage, *cf.* Via Duca degli Abruzzi, gr. 1 (16/11/22): Comast cup and a large MC kotyle with thick filling. For a somewhat later context of a comast cup, *cf.* Villa Pepe, gr. 2 (21/9/15), with Attic only, including a ' Kleinmeister ' band-cup.

APPENDIX

The Silhouette or Subgeometric Style

The following discussion is intended to supplement the somewhat scanty and scattered account of this type of decoration given in Payne's work *Necrocorinthia* and elsewhere. No profound conclusions have been or can be reached concerning it, and of necessity its dating must be vague in the extreme. The material is divided into categories according to the type of silhouette decoration. The term ' subgeometric ' is misleading, not only because a great deal of this style of decoration is far removed in time from the Geometric Period, but also because it frequently shows no geometricising qualities at all.

(A) *The ' Running Dog ' Style.* It has been discussed by Johansen, Payne and Ure.[107] This form of decoration seems to begin with the ovoid aryballos period of Johansen, when it appears on aryballoi (as *VS*, pls. 15–16), and on the large kotyle fragment *VS*, 78, fig. 48.[108] It is also very common on small kotylai of the type *NC.*, 23, fig. 9 C. The ' running dog ' frieze very frequently appears on pointed aryballoi, which seem to last into the Early Corinthian period in the graves of Sicily and Rhodes.[109] It should be noted that the small kotylai of *NC.*, 23, fig. 9 C type (*cf.* Munich, *SH.*, pl. 6, 220) also occur in Rhodes and Sicily with Early Corinthian, but not later (though there are rare exceptions), while the small linear kotylai continue into the fifth century.[110] The occurrence of a fragment of a ' running dog ' kotyle of the early type in a chamber tomb at Kamiros (Makri Langoni; *Clara Rhodos* IV, 64, gr. 8, figs. 41–4) with Attic b.f. and black-glaze pottery, must be explained as an intrusion.[111] A few examples of the kotylai occur in the well groups at Corinth (*Corinth VII*, i, groups 153–73; 202–11; 218–311). *Ibid.* pl. 23, 160–1 are definitely earlier than *ibid.* pl. 29, 208–10, in keeping with the apparent order of the groups, but the solitary example in the large Early Corinthian well-group (*ibid.* pl. 33, 249) looks earlier than the foregoing, though it should be later. The subsidiary decoration seems to be the main criterion of date, though this, too, is often deceptive.

There are no examples of the ' running dog ' frieze on alabastra of Protocorinthian shape, but it appears frequently on alabastra of Corinthian shape of the Transitional and Early Corinthian periods; cf. *MA* XXV, 555, fig. 141 in Syracuse from Gela, Louvre E 396 (Pottier, pl. 40), *CVA Brussels* I, pl. 1, 12, and Etruscan imitations. Like the kotylai, pointed aryballoi and alabastra with this type of decoration do not as a rule continue much beyond the early part of the Early Corinthian period.

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[107] *VS.*, 78–9; *NC.*, 8 and n. 2; *Aryballoi and Figurines from Rhitsona*, Appendix, p. 93.

[108] If, indeed, this vase belongs to this period, and is not somewhat later.

[109] Associated with Early Corinthian alabastra. See p. 173, n. 47, for Rhodes.

[110] See Johansen, *VS*, 79.

[111] See n. 40 for a general discussion of this problem.

There is considerable variation in the type of 'running dog'; *cf.* the examples given by Payne, *NC.*, 279, under no. 191. Despite Payne's assertion (*ibid.*) that this type of decoration does not survive into the sixth century (see above), there appear to be rare examples of its use in Middle Corinthian pottery; *cf.* the kotylai *CVA Louvre* VIII, pl. 27, 1, 5 and 6, which appear from the shape and subsidiary decoration to be Middle Corinthian, and the miniature kotyle, *MA* XXXII, pl. 87, 9 from the temple of Demeter at Selinus, in which the rays are replaced by broad bands, as in the linear kotylai of the Middle Corinthian period. In these examples the 'running dog' frieze is very debased. *Cf.* also the two kotylai from the Middle Corinthian well-group at Corinth, in *Corinth VII*, i, pl. 42, 339 and 341.

It should be noted that, among the Protocorinthian fragments with this type of decoration from Perachora, both the stylised type occurs (varying very much in character and almost impossible to date), and the naturalistic type, which differs only in the absence of incision from the subsidiary friezes in incised technique on Protocorinthian aryballoi. Here again it is difficult to make a distinction of period, except that the Late Protocorinthian and Transitional examples are often of a heavier form.

The publication of the vases with this decoration from Perachora will justify the conclusion that the 'running dog' frieze should not be used for purposes of dating; the rest of the decoration seems to afford a surer basis, though by no means completely satisfactory. Thus it may be noted in connection with, *e.g.*, the linear shoulder decoration of conical oinochoai, that Payne *NC.*, no. 38 (LPC) has tongues on the shoulder; so, too, nos. 141 and 142 (Transitional) and 750 (EC). Tongues can therefore be a fairly early form of decoration, though they are generally regarded as later, *e.g.*, on kotylai. Shoulder-rays and certainly cross-hatched rays (sometimes with hooks) look and may well be early,[112] but it should be noted that hooks also appear, in a Perachora vase, in a context which, on other grounds, is certainly not early.

(B) Less common is the ordinary type of silhouette animal frieze. Early examples are *VS*, pl. 16, 4–6; 20, 2 *a–b*; 21, 1 *a–b*; 24, 1 *a–b*; there are a number of Protocorinthian examples from Perachora. To the Late Protocorinthian period belong, perhaps, the following, not mentioned by Payne in his Catalogue: (1) fragmentary kotyle in Syracuse from the Fusco cemetery (*AdI*, 1877, p. 44, 4 and pl. CD, 7), of early shape with long rays; friezes divided by narrow bands; in uppermost frieze, group of dot rosettes;

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[112] *Cf.* the linear example of the shape, *MA* XXV, 541, fig. 124.

middle frieze, silhouette animals; third frieze, running dogs; no filling, good style. (2) pyxis with faintly concave sides, in Copenhagen, *CVA* II, pl. 89, 2: on the rim, dot-rosettes and zig-zag; in frieze, lion, bull, doe (?); filling of dot-rosettes and zig-zags (cf. *VS*, pl. 35, 5 ?); it is later than the ovoid aryballos *VS*, pl. 16, 5 or pl. 21, 1 *a–b*, and earlier than the kotyle in Syracuse. Here or with the following Transitional examples belongs *Corinth VII*, i, pl. 23, 159, from the well-group 153–73.[113]

According to Payne (*NC.*, 279) the following are Transitional: *CVA Copenhagen* II, pl. 91, 2 (*NC.*, no. 197), kotyle of early shape, with animal frieze of rather heavy type in silhouette, with dot-rosettes; Heidelberg, *NC.*, no. 75 E, fig. 118 C, an alabastron with three friezes of animals of heavy type with dot-and-circle filling, ' certainly Transitional ' (Payne); Munich, *SH.* 221 (pl. 12 and fig. 14), kotyle, metopes with birds at rim, below, silhouette frieze with hailstorm filling, a row of rosettes and double rays. Payne cites two other examples, in Frankfurt and Corinth,[114] with similar metopes. With the silhouette frieze of the Munich example (with dot filling) he compares Berlin 321 (kotyle with very narrow foot). A further example of a kotyle of early shape with similar bird metopes is Naples 128236 (Payne no. 194 = *MA* XXII, pl. 51, 4, from Cumae); the frieze of rather thin crude animals is quite different from the Copenhagen example. It might be called an early example of the ' straggling ' type.[115] An interesting example of the combination of incised and silhouette styles is afforded by the rimless cup Bonn, inv. 2055 (*AA* LI (1936), 354, figs. 8 and 9). For its shape *cf.* Payne, *NC.*, nos. 709–12 (he gives a late seventh-century date for the group; all the examples listed are of black-polychrome or linear style). The interior is in the ordinary incised style, and does not appear to be earlier than lateish Early Corinthian. The exterior combines birds in metopes, of the type mentioned above, and a frieze of animals in unincised silhouette, very similar to the kotyle Payne *NC.*, no. 194 and to a Perachora example. It would appear, therefore, from the interior decoration that neither type of decoration used on the exterior is necessarily early, and that in the case of *NC.*, no. 194 the shape rather than the decoration affords the more dependable criterion of date. The Munich kotyle with the bird metope decoration is further discussed below in connection with the silhouette-bird type.

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[113] The kotyle published by Coliu, *Musée Kalinderu* (Bucharest 1937), no. 7, p. 29, figs. 7–8, is of uncertain date. Decoration: vertical wavy lines on rim (double axe at handles), divided by broad and narrow bands from a silhouette frieze of lions, goats and swan, with filling of small neat dot-rosettes; below, dot-and-band and rays. The style seems early, but the shape is not; it is later than that of the kotyle published *ibid.*, fig. 6, p. 28 (no. 6), with double rays, of the very narrow-based type similar to *NC.*, fig. 120 A. No. 7's shape is more like *Corinth VII*, i, pl. 34, 252 (from the EC well-group), and shape is probably a better criterion than style in this case; so that the kotyle may be dated close to the end of the seventh century. The same might be true of the not very dissimilar kotylai from Tomb 42 at Selinus. See p. 179, n. 79.

[114] The Corinthian example, with birds and dogs, is published in *Corinth VII*, i, pl. 25, 183.

[115] *Cf.* also the alabastron with two friezes of silhouette animals in crude style from the Agora South-East deposit at Perachora (*Perachora* I, pl. 31, 3), which may be Transitional in date, and is close in style to the ' straggling ' type.

Early Corinthian and later examples of the ordinary silhouette style do not appear to be very common. The following Early Corinthian examples may be noted from *Necrocorinthia*: no. 369, alabastron in Athens (?) from Orchomenos (*BCH* 1895, 192, fig. 16), petals on the shoulder, animal frieze between broad dot-and-band, heavy style, not unlike Payne *NC.*, fig. 118 C, no filling; no. 369, alabastron in Athens (?) from Orchomenos (*BCH*, *ibid.*), like the foregoing, but with petals on the base; the animals are thinner, and in style not unlike the kotyle *NC.*, no. 194 and the alabastron Graef, i, pl. 15, 405 (see below, in the discussion of the ' straggling ' type); no. 374, Bonn 590, alabastron with ' river-god ' (with bull's horns) running; no. 375, Louvre A 457, alabastron with Typhon, filling of loose dot-rosettes. The kothon *NC.*, no. 723 A (in Syracuse, from Megara Hyblaea; *MA* I, 863), with black-polychrome decoration on the upper side, and a frieze of lions (?), looks early, but there is some uncertainty about the tomb-group in which it was found. It has flat handles, which are usually but not necessarily late (see below, under ' kothons ').

NC., no. 632 (*Délos* X, pl. 25, 325), a large, round-bottomed aryballos with three friezes of ordinary silhouette animals, with thick filling, is called Early Corinthian by Payne, but it might well be of Middle Corinthian period. It is not far from the group of plates with concentric bands of silhouette animals: *NC.*, no. 1034, in Cassel from Samos (Boehlau, pl. 15, 4); 1035, Dugas, *Délos* X, pl. 6, 505; no. 1033, British Museum A 1513; add *MA* XXXII, 311, fig. 129, and a Perachora example (of similar section to *NC.*, no. 1034). Of the other examples in Payne's group, no. 1036, *CVA Bibl. Nat.*, I, pl. 10, 7 has more elongated animals and is perhaps a little later; the Oxford fragments (*CVA* II, pl. 6, 15–17) seem more crude than the above; the fragment from Cumae in Naples (*MA* XXII, 467, fig. 168) approaches more closely the type of stylised animals (with hailstorm filling in the field) with ' stilt ' legs (see below). The Samos example was found (Boehlau, 38–9) in a sarcophagus with a kotyle of the Samos group (cf. *NC.*, pl. 33, 11), which Payne dates *c.* 580 B.C., and other Middle Corinthian pottery. The Würzburg amphoriskos (Langlotz, pl. 9, 117), with silhouette animals with blob filling, is of a style somewhat similar to the plate group, but the animals' legs are more slender. Langlotz dates it to the beginning of the sixth century, but it is probably later; the shape is common at the end of Middle Corinthian (*cf.* the example found in the same sarcophagus as the silhouette plate and Samos kotyle, Boehlau, pl. 4, 3), and there are obvious Middle Corinthian (late) examples in practically the same style, but with incised detail.[116] The lid fragment *F. de D.*, V, 140, fig. 564 (silhouette animals with dot-and-circle filling), is difficult to date; it may be Transitional or later. The tripod-pyxis, *CVA Poland* I (*Czartoryski Collection*), pl. 6, 4, in silhouette style with varied filling, is Middle/Late Corinthian, not unlike members of the 'straggling' group in some respects.

Akin to the above is a heavy crude type of silhouette-animal frieze, *cf.* the kotyle fragment, *AH* II, pl. 59, 27, and the alabastron Graef, I, pl. 15, 428, with narrow frieze between broad black bands overlaid with narrower purple stripes, of crude style, but probably Early Corinthian.[117] The concave pyxis *CVA Madrid* I, pl. 2, 12 is of the ordinary heavy type animal frieze (blob filling) of Middle (?) Corinthian date; *cf.* the kotyle of Middle Corinthian shape, *CVA Louvre* VI, pl. 6, 16–17 (similar to Munich, *SH.* 222 in shape) with blobby animal frieze, and *Perachora* I, pl. 33, 3. It should be noted that there are also silhouette figure scenes, cf. *Perachora* I, pl. 33, 1 (part in outline), the female bust of *ibid.*, pl. 32, 22, and the amusing representation of a monkey or human being, *Hesperia* I, 73.

(C) With the group of plates mentioned above Payne associated the group of 'subgeometric' kotylai, *NC.*, 309, nos. 965–9. Of these the fragment in Naples from Cumae (*MA* XXII, 467, fig. 169) is of the same type as the plate fragment *ibid.*, fig. 168 from the same site, mentioned above. Similar are the kotylai Munich, *SH.*, pl. 12, 222, Vienna, Hofmus., 175, and Marseilles (Vasseur, pl. 7, 13). The kotyle group is far more stylised than the series of plates (having in common with the latter only the 'hailstorm' filling), and from the stiff-legged animal type might be called the 'stilt-legged' group.[118] It may be later than the plates, but is probably still Middle Corinthian,[119] and in origin perhaps even earlier; *cf.* the Leyden example mentioned below. For other examples of the type, see Ure, *Aryballoi*, 93 and pl. 5, 86. 1 (*cf.* the lid fragment with flat knob, *MA* XXV, 549); 87. 14; 125 *a.* 1 (*cf.* the aryballos from Orchomenos, *BCH* 1895, 196, fig. 18); *MA* I, 822, gr. 37, fig., found with small band kotylai; *MA* XXII, 467; *Délos* XVII, pl. 58, 83 (kotyle with grazing goats, no filling; of the same shape as Munich, *SH.* 222); Brants, *Leyden*, pl. 12, 18, alabastron of Corinthian shape, with three friezes (divided by double bands) of silhouette animals of the same 'stilt-legged' type, but apparently early, and with filling of dot-rosettes of neat type, perhaps the earliest of the style; Delphi, *F. de D.*, V, 155, fig. 639, kotyle fragment (broad bands below the frieze); Syracuse, from Megara Hyblaea (*MA* I, 804, fig.; *NC.*, no. 1328), pyxis with convex sides and cylindrical handles; and kotyle fragments from Selinus (*MA* XXXII, pl. 89, 2 and 7), which have a similar ' stilt-legged ' animal frieze with dot and blob filling, but may be either Corinthian or local. The powder pyxis *MA* XVII, 54, fig. 26, with crescent whirligig on the horizontal surface and a silhouette animal frieze, and on the vertical side dancers and two winged horses all in silhouette, is closer in style to the plate group (*cf.* the small filling blobs) than to the ' stilt-legged ' animal group.[120] The amphoriskos Oxford, 1928. 26 (*NC.*, no. 1074), belongs to the ' straggling ' group.[121] Ure, who does not distinguish (*op. cit.*, 93) between the various types of silhouette animals, dates the type to his third Corinthian period, as far as the alabastron *ibid.*, pl. 5, 86. 1 is concerned; the two aryballoi *ibid.*, pl. 5, 87. 14 and 125 *a*. 1 he assigns to the second of his Corinthian periods. The Leyden alabastron would then be still earlier. Thus the type seems to extend from Early to Late Corinthian. It is represented at Perachora by a number of examples from the Limenia sanctuary finds. *Cf.* also *Perachora* I, pl. 33, 7.

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[116] Cf. *MA* XVII, 625, fig. 438.

[117] Graef calls it 'Nachahmung protokorinthischer Muster in altkorinthischer Töpferei'.

[118] Note, in connection with this group, that something like it occurs in Protocorinthian, in the ovoid aryballos period; *cf.* Johansen, *VS*, pl. 17, 5.

[119] A convex-sided pyxis of crude Middle Corinthian style, having a lid with 'stilt-legged' animals of the Munich kotyle (222) type with hailstorm filling, was found at Papatislures (Kamiros), in gr. 5 (*Clara Rhodos* VI–VII, 23 ff., and fig. 28), which is not, however, of a great deal of value for close dating, since it obviously contained two interments. See p. 172, n. 42.

(D) The ' straggling ' type is sometimes similar in general effect to the above, but shows more obvious connections with the ordinary type of animal frieze. It is represented at Perachora by a number of examples, one of them comparable to *NC.*, 314, fig. 157. *Perachora* I, pl. 32, 13, is about half-way between the ordinary silhouette style and this type. An early example of the type is the kotyle Naples 128236 (*NC.*, no. 194), of early shape, with bird metopes (as in Munich, *SH.* 221) on the rim, and, below, one frieze of rather thin and crude animals, somewhat similar to a Limenia example. Another example, the rimless cup Bonn, inv. 2055 (*AA* LI (1936), 354, figs. 8 and 9), shews, as was mentioned above, that this type of decoration is not necessarily early. Other (later?) examples are the powder pyxis from Tanagra (*JdI* II, pl. 2, and p. 18), the jug Louvre A 425 (*CVA Louvre* VIII, pl. 24, 10–11),[122] which has the common type of filling crosses (later than the powder pyxis), and the alabastron Graef, I, pl. 15, 405, with two friezes bounded by groups of three narrow bands, no filling. A much cruder example, partaking of the character of the ' stick-legged ' animals, is the alabastron with three friezes, *Thera* II, 221, fig. 423. Following all these are: the amphora *Délos* XVII, pl. 59, 124, and, of the same style, the powder pyxis fragment *Thera* II, 23, no. 36, fig. 50; later, too, is the amphora *Délos* XVII, pl. 59, 123. Somewhere here belong the concave-sided pyxis *CVA Oxford* II, pl. 1, 55 [123] and the cruder example of the same type, *CVA Poland* I (Czartoryski Collection), pl. 6, 3. They are of the sixth not of the seventh century. The amphora *Délos* XVII, pl. 59, 125, and the amphoriskos Berlin 3933 (*Collection Sabouroff*, pl. 47, 2) represent the final stage in this group. For purposes of dating the only material available (apart from the rimless cup in Bonn mentioned above) is the trefoil oinochoe with narrow foot and two friezes of silhouette animals (in type between the 'stick-legged' and 'straggling' forms) with hailstorm filling found in Rhodes (*Clara Rhodos* III, 120, Ialysos, gr. 88; *CVA Rodi* I, pl. 1, 3), with a Laconian III kylix (cf. *BSA* XXXIV, 180). On the basis of its shape the jug may be dated, as by Lane, to the first quarter of the sixth century; compare Payne *NC.*, fig. 10 E (Middle Corinthian). A powder pyxis from Perachora, with one straggling animal in a bird frieze, shows that the type may be early; so does the early Naples kotyle. This type of decoration may extend from the later seventh century (it is by no means certain that it started as early as the Transitional period) to the end of Middle Corinthian.

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[120] Though the date of the grave group, according to Payne, is mid-sixth century (*NC.*, 294). It was found in grave 64 with a terracotta standing female figurine with a dove.

[121] The convex-sided pyxis Louvre E 609 (Pottier, pl. 43), signed by Khares, hardly belongs to this group, though Payne (*NC.*, 322, no. 1296) compares it, not very suitably, to the powder pyxis *MA* XVII, 54, fig. 26.

[122] Of Payne's shapes the nearest is perhaps *NC.*, fig. 10 H.

(E) There remains the 'silhouette-bird' type of decoration, which is fairly common. The Corinthian silhouette bird in its most common form varies little from Transitional to Middle Corinthian.[124] It appears on Early Corinthian alabastra; *cf.* the examples in Syracuse, from Gela (*MA* XVII, 33, fig. 3), with bands and a narrow frieze of silhouette birds (found in grave 5 with a scale-pattern alabastron and scale-pattern pointed aryballos), and in Leningrad, from Olbia, Payne, *NC.*, fig. 121 A; and on other shapes, *cf.* the kotyle fragment *Perachora* I, pl. 32, 2, and (somewhat later) the birds in white paint on kotyle rims, as *Corinth VII*, i, pl. 35, 261–2. The dating in the later periods is assisted by the silhouette bird frieze on a Perachora (Limenia) bottle, and the occurrence of similar birds on convex-sided pyxides and lids (*cf.* the fragment *F. de D.*, V, 140, fig. 587 and a Perachora (Limenia) lid). Much the same type of bird appears (in a frieze with hailstorm filling) on the two-frieze f.b. aryballos *Délos* X, pl. 27, 345, called LC I by Payne.[125] Rather different is the type on the lateish kotyle (now in Amsterdam) *CVA Hague* I, pl. 1, 9 (said in the catalogue to be possibly of Boeotian origin).

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[123] Payne says of this (*CVA Oxford* II, p. 62): 'The vase is difficult to date; the curving sides show that it cannot be earlier than the period of Transition from Protocorinthian to Corinthian; it is not likely to be later than the end of the seventh century, as in the sixth century other types of pyxis prevail. Probably late seventh century.'

[124] Note that the Protocorinthian type is generally quite different; *cf.* Johansen, *VS*, pl. 6, 1. A forerunner of the Corinthian type is *Perachora* I, pl. 23, 8.

[125] Called Late Corinthian I by Payne (*NC.*, 321 no. 1292), probably on account of the floral chain in the upper frieze, which is somewhat similar to *NC.*, fig. 65 D.

With a Perachora example may be compared the conical oinochoe from Aegina, *AM* XXII (1897), 296, fig. 21, covered with black glaze, as Payne *NC.*, fig. 136, with birds in white paint on the shoulder (vertical wavy lines between).

Of the same style as the powder pyxis *CVA Oxford* II, pl. 2, 36 and pl. 3, 16 (*NC.*, no. 672), *i.e.*, with the same bird-type, are three Perachora (Limenia) powder pyxides, in one of which there is a ' straggling ' animal in the bird frieze. Payne regards the Oxford powder pyxis as early (late seventh century) owing to its resemblance to the early kotylai *NC.*, nos. 193–5 (*i.e.*, such as Munich, *SH.* 221 and the Naples kotyle from Cumae).

The naturalistic type of bird (crane?) appears also, *e.g.*, on the cup Munich, *SH.* 205, fig. 10. Not far removed is the type *Perachora* I, pl. 31, 5. Quite a different type of bird (stylised) appears on the pyxis with upright handles, *Délos* X, pl. 32, 507. The linear motive of the upper frieze in the Delos vase is noteworthy; it looks as if it were derived from a frieze of silhouette animals such as *Délos* XVII, pl. 59, 125.

ALABASTRA

On the Protocorinthian alabastron shape, see *NC.*, 269–71, where the origin of the shape is discussed. The earliest examples are a little earlier than 650 B.C. *Cf.* also *VS*, 102, and pl. 38. On the Transitional shape proper, see *NC.*, 31–2, 274, Groups A–C, and fig. 118 A. *VS*, pl. 45, 4–5, shews clearly the different shapes of Transitional and Corinthian alabastra. Both these examples are Transitional in style, but in pl. 45, 5 (Griffon Group) the developed later form appears (see *NC.*, 275–6). The style of decoration is also modified at this period (*ibid.*, 275), from frieze to over-all decoration. For the Corinthian form proper, see *NC.*, 281–6 (EC; discussion of the EC shape 231); 303 (MC); 319 (LC I).

(A) Add to Payne's list the following:

(1) *CVA Louvre* VI: pl. 3, 1–2 (CA 1740), man running to r.; 3–4 (CA 1739), man running, and snakes. These are mentioned in *NC.*, 341. Pl. 3, 12–14 (CA 2574) is also a LC Group B alabastron, with griffon-bird. Pl. 3, 15–18 (MNB 627) is noteworthy for the very considerable elongation of the forms, especially in the panther, which has a tiny head on a large heavy body. Pottier compares *Délos* X, pl. 65, 439. Despite the thick filling ornament it should perhaps be called LC I, and possibly it is not Corinthian. Payne (*NC.*, 341) calls it late MC, and compares the pyxis *NC.*, no. 888, and related alabastron *NC.*, no. 802.

(2) *CVA Louvre* IX: pl. 29, 14–15 (E 497), belonging to the ' Griffon Group '; pl. 29, 9–10 (E 395), similar to Payne no. 75 F; pl. 29, 24–6 (E 494), resembling the style of the Painter of Palermo 489; pl. 30, 1–2 (E 505), of a noteworthy crude heavy style. There are numbers of others in pls. 29–30 (all EC of Payne's Group A, *NC.*, nos. 208 ff.), and pl. 31 (all EC of Payne's Group D, *NC.*, nos. 380 ff.), of no great merit. Note the bounding lines to pl. 29, 32–3 (E 470). Pl. 30, 21 and 22 (E 493), and 23, 24 and 25 (E 502/1) are by the

same hand as Payne *NC.*, nos. 274 and 366 C. Interesting are pl. 6, 21–6 (E 503, 510, 507 and 496). They are called Italo-Corinthian. The clay of E 503 is described as ‘ jaunâtre, un peu grisâtre ’, that of the rest ‘ brunâtre ’. The editor calls them ‘ very near to the Corinthian style ’. They *all* appear to be Corinthian.

(3) *CVA Musée Rodin*: pl. 2, 3 (153): small; inferior silhouette animals; little filling ornament. Period uncertain. Plaoutine compares *NC.*, nos. 367 ff. He rightly points out the resemblances to the late alabastra *NC.*, nos. 1200 ff., but it is probably earlier. Pl. 2, 9 (548): large; sirens and scale-pattern band. ‘ Scale-pattern ’ Group. Pl. 2, 5–6; 7–8; 10 and 13; 11 and 12 (872, 874, 873, 518): small; all EC, of Payne’s Group A (*NC.*, nos. 208 ff.). Pl. 3, 1–3: large; bounding lines above and below field; panthers and bird. Limited use of white dots. It belongs to Payne’s group 456 B–E. Pl. 3, 4 (875): small; bands below field and around base; panther; Group A (*NC.*, nos. 1200 ff.), of crude LC style, if it is Corinthian at all. Pl. 3, 7–9 (551): large; broad and narrow bands around neck and foot; Boread and swan. Curious scrappy style. Lateish Corinthian; Plaoutine puts it among *NC.*, nos. 1205 ff., and compares a very similar piece *CVA Hague* I pl. 4.

(4) Payne, in *NC.*, 343, mentions *CVA Cambridge* I, and comments there on some of the Cambridge vases. The following are not mentioned by him: pl. 5, 2–5: small, of Payne’s EC Group A (*NC.*, nos. 208 ff.). Pl. 5, 13 (G 34) is a large alabastron of the Gorgon-Bird Group. Pl. 5, 15 (G 33) is *NC.*, no. 386.

(5) *CVA Oxford* II. References to *Necrocorinthia* are incorporated in this fascicule, but the following vases, of some interest, do not appear in the *NC.* catalogue: pl. 1, 57 (1874. 306): EC Group A (as *NC.*, nos. 208 ff.); small birds between lions. In style it is not unlike works of the Mykonos Painter (*cf.* the feeble lower jaw of the lions). It also resembles the style of a Perachora concave pyxis, which is similar to the kotyle *CVA Oxford* II, pl. 1, 54 in its limited incision, though the kotyle is of much better style. All three represent a group linking the heavy Transitional style to its counterpart in EC. Pl. 1, 58 (1872. 1255): EC Group A, with a curious type of decoration; a large rosette (alternate red and black tongues) surrounded by a red circle and then by a circle of black tongues. Pl. 2, 11 (1885. 628): panther-bird; EC/MC Gorgon-Bird Group; *cf.* Payne *NC.*, nos. 440 ff. With the same decoration and belonging to the same group, the large alabastron pl. 2, 13 (1885. 627). Pl. 2, 12 and 17, and pl. 6, 3 (1927, 4474): small EC Group A with male sphinx and lion; related to Griffon Group? Pl. 2, 15 and 18 (1879, 105): siren belonging to Payne’s group *NC.*, nos. 801 ff. Pl. 2, 37 (1927, 5): EC Group A; note curious representation of a female figure in a long dress carrying a shield, between siren and eagle (?).

(6) *CVA Hague* I. References to this fascicule are incorporated in *Necrocorinthia*, but the following may be added to *NC.* Cat.: pl. 4, 2 (inv. 715): large, EC (MC according to Amyx, *op. cit.*, 220), of Payne’s ‘ White-Dot ’ Group; pl. 4, 3 (inv. 599): large, with two bands of scale-pattern and two friezes of animals; ‘ Scale-pattern ’ Group. Pl. 4, 6 (inv. 3412): small EC Group A (*NC.*, nos. 208 ff.), with confronted lions. Pl. 4, 5 (inv. 615): large; Boread; Payne’s Group C of MC. Now published *Amsterdam*, *Gids*, pl. 55, 1271. Amyx, 220, regards it as LC I, and ascribes it to his ‘ Gallatin Group ’, *NC.*, nos. 1225–7. This may well be so.

(7) *CVA Poland* I (Goluchow): pl. 6, 9*a*–*b* (inv. 3): EC Group A; flying bird between confronted cocks; very neat style. Pl. 6, 10*a*–*b* (inv. 5); large; lotus-palmette complex and bird; thick filling. Payne’s MC Group C. Pl. 6, 11 (inv. 8): large; three friezes of padded dancers; thick filling; style very similar to the examples from Vulci in Philadelphia (*Dohan*, pl. 52).

(8) *CVA Poland* III (*Coll. Diverses*), Wilanów: pl. 1, 1–2; two exx., with two friezes divided by bands; (1) (*a*) winged goddesses with swans; panther; swan; (*b*) padded dancers. (2) (*a*) panther; swan, etc.; (*b*) bulls; man with spear; ‘ begging ’ hare (note for humorous rendering). Neat Warrior Aryballos style.

(9) *CVA Madrid*: pl. 3, 10: with scale-pattern and two friezes of shielded warriors; dot rosette filling. Regarded by Amyx, 223, as a connecting link between the MC exx., with similar warriors (related to the ‘ Scale-pattern ’ group), and the LC vases with similar decoration. Pl. 4, 1*a*–*b* (inv. 10817): Payne’s MC Group C. Pl. 6, 3*a*–*b* (inv. 32647): with two friezes; neat style with thick filling ornament; the lion (fig. 3*a*) is noteworthy and

unique; its paws rest on a 'volute' ornament growing from the base line; its tail passes inside the flank, recalling *NC.*, 305, fig. 140 *bis.* EC; but note the curious late-seeming drawing of the siren.

(10) *CVA Univ. of California* I: pl. 4, 1 (8/3172): MC shape (bulge below neck); the clay is described by Smith as 'white'; tongues on neck, then three narrow bands, broad band, belt of narrow bands finely drawn, like those of a PC kotyle, then a broad band; the base is undecorated. Curious style; an attempt, apparently, to revive a PC technique. Pl. 4, 2, 3, 4, 5; pl. 5, 1–6: all small Group A exx. of EC style (*NC.*, nos. 208 ff.); pl. 4, 2 and 5 and pl. 5, 6 belong to the 'Lion Group'. Pl. 8, 1*a–c* (8/351): Boread; MC 'White-Dot' style; *cf.* Payne, *NC.*, no. 392. According to Smith the example *Clara Rhodos* VI–VII, 30 ff., fig. 18 f., is close to it in style; 'a parallel of some special value, because the context of accompanying vases is given'. Pl. 8, 2*a–c* (8/3303): cock; large Group A ex. of MC shape and style (*NC.*, 303), with a few large rosettes; related to *CVA Louvre* VI pl. 3, 7–11 (*NC.*, no. 794). Pl. 9, 1*a–b* (8/3304): lion and swan; thick filling; note double line in shoulder complex and above belly stripe. Pl. 9, 2 (8/354): large; with scale-pattern, frieze of rough shielded warriors (dot-and-circle filling), and incised verticals. MC 'Scale-pattern' Group or related; *cf.* Schaal, *Bremen*, pl. 5 (Scale Painter), which is another of the group. Pl. 9, 3 (8/353): large; with panthers.

(11) *CVA Providence* I: pl. 5, 1*a–b* (C 1483): EC Group A; with cock; curious style.

(12) *CVA Taranto* II: pl. 1, 4: medium-sized; short tongues on neck, no bounding lines; siren with open wings (palmette with streamers 'growing' from head); thick filling. Heavy style, with abundant use of white dots; MC 'White-Dot' style. Vaccarella 21/6/26. Pl. 2, 2: medium-size; tongues on neck; bands above and below field; siren with open wings. Thick filling and abundant use of white dots. Heavy MC 'White-Dot' style.

(13) A quantity of small alabastra have been found in the Italian excavations in Rhodes, and are published in *Clara Rhodos* and *CVA Rodi* I and II. Most of them are small Group A examples of no great interest, and with the aryballoi they form the bulk of the Corinthian pottery from the more recent excavations. The following are perhaps worth individual mention:

> (*a*) *CVA Rodi* I: pl. 2, 4 (inv. 11729): rare slender shape; griffon-bird; thick filling; late MC style. From Ialysos, gr. 406; *Clara Rhodos* III, 89. Pl. 2, 7 (inv. 11369): Group A; lion attacking bull; good EC style. From Ialysos, gr. 333; *Clara Rhodos* III, 127. Pl. 2, 9 (inv. 11550): centaur, female figure and horse protome; EC/MC; Payne's 'Gorgon-Bird' Group. From Ialysos, gr. 377; *Clara Rhodos* III, 78, fig. 69.
>
> (*b*) *CVA Rodi* II: pl. 3, 2 (inv. 11579): 'Scale-pattern' Group, or related. From Ialysos, gr. 380; *Clara Rhodos* III, 80. Pl. 5, 6 (inv. 13025): Group A ex., with quatrefoil, resembling the usual late aryballos type, but the hatched portions between the foils are somewhat larger than usual. From Kamiros, Makri Langoni, gr. 118; *Clara Rhodos* IV, 317, fig. 346.
>
> (*c*) *Clara Rhodos* IV: Makri Langoni, gr. 210 (inv. 12562): small Group A ex., with star or starfish (?). Gr. 214 (inv. 12581): EC Group A; snake between confronted cocks; very neat style.
>
> (*d*) *Clara Rhodos* VI–VII: Papatislures, gr. 2 (inv. 13672), pl. 1 and figs. 5–6: fine ex., with four friezes; usual subsidiary decoration and dividing bands. In friezes (1) two female figures in part outline, flanked by padded dancers; (2) and (4) animal frieze; note lion attacking stag in (2); (3) frieze of galloping horsemen. Thick filling; probably early MC. Papatislures, gr. 4 (inv. 13686), figs. 18–19: ex. with usual decoration above and below the frieze; Boread with curved wing; lion. Thick filling. 'Gorgon-Bird' Group. Late EC or MC. Papatislures, gr. 13, figs. 67–8: tongues on neck; two friezes; (1) goat, lion, etc.; (2) running dogs. Dot rosette filling. Bold style in drawing and incision. Transitional. Found with a pointed aryballos, EC dot-and-band alabastron, and a seventh-century type 'bird-bowl'. *Note:* Nearly all the rest of the Corinthian pottery from Papatislures, Checraci, Visicia, Fikellura, etc., consists of aryballoi and small alabastra of no special interest. In general, it should be observed,

the quantity of Corinthian pottery (and especially good pottery) found in the Italian excavations is very limited. In the 'stipe votiva' from the temple on the acropolis of Kamiros, some PC and Corinthian fragments occur (*op. cit.*, fig. 101), including fragments of pointed aryballoi, but they are limited in number and too small to be of interest.

(*e*) *Clara Rhodos* VIII: Ialysos excavations 1934, Dafni, gr. 2, figs. 12–13: large ex. with Boread and bird; EC. Marmaro, gr. 1, figs. 52 and 54: large ex.; sphinx and swan; EC/MC.

(14) Dugas, *Délos* XVII (1935): vases from the 'Fosse de la Purification' on Rheneia. There is remarkably little that is of interest among the alabastra. The following is a rough division into Payne's classes: Transitional: pl. 55. 42; Early Corinthian: Group A: Pl. 55. 43, 44, 45, 47, 48, 49, 53; pl. 56. 46, 50, 51, 55, 58; pl. 57. 59, 60, 61, 62, 63, 67; pl. 63. 52 (fragmentary, of fine style); Group C: Pl. 55. 39, 40, 41, 56 (with flat bottom); Group E (Gorgon-Bird Group): pl. 56. 29, 57; pl. 57. 65, 66, 68; Late Corinthian: Group A: pl. 55. 54. Pl. 57. 64, probably of late MC date, appears to have had a minor frieze below the main one. Pl. 61. 69 is elaborately decorated, with shielded warriors; the shields appear to bear elaborate animal devices; below the main frieze is a subsidiary animal frieze; *c.* 600 B.C.?

(15) Langlotz, *Würzburg* (1932): pl. 10, 88 and pl. 12, 88: alabastron of roughish style; tongues on neck; two friezes of animals with dot-rosette filling. Langlotz calls it LPC and considers it to be from the same workshop as *NC.*, nos. 72 and 73 (regarded as Transitional by Payne); he also compares *NC.*, no. 30. Pl. 10, 95: Group A; Boread; dot-and-circle filling; Transitional or EC. Pl. 225, 769, as Amyx points out (231, n. 114), is Corinthian (not Italian), with friezes of warriors (cf. *NC.*, nos. 1228–32) of LC I period.

(16) Bonn, A. Greifenhagen, *AA* LI (1936), 343 ff. includes two interesting alabastra: No. 6 (inv. 860), figs. 6 and 7: tongues around neck; no bounding lines to frieze; serpent devouring a man, flanked by a bird with long beak, and a panther. Greifenhagen suggests the man may be Jason. Neat incised rosettes and neat detail. EC. No. 9 (inv. 845), figs. 6 and 12: base flattened; bounding lines above and below the frieze; Chimaera, with double-line shoulder complexes. Filling of rosettes, some surrounded by an incised glaze ring. MC.

(17) Braunsberg, *AA* XLVIII (1933): 421, fig. 4: alabastron interesting only for its peculiarly horrible style. Tongues on neck; narrow bands above the frieze; broad polychrome-edged band below; bearded siren, with a few dots as filling. By the same hand as the flat-bottomed aryballos in the National Museum, Athens, illustrated *op. cit.*, fig. 5. LC I. See Amyx, 230, n. 84, who compares *NC.*, nos. 1269–70 and *CVA Louvre* VI, pl. 3, 12–14.

(18) Schaal, *Bremen*: pl. 5, 1: large type; tongues around the neck; two friezes of animals and two bands of scale-pattern, divided by groups of narrow bands. In friezes: panther, goat, lion, boar, etc. By the Scale Painter. MC.

(19) Blinkenberg, *Lindos*, I: pl. 50, 1124: fragmentary; petals around the neck and base; band above and below the frieze. In frieze: grazing goat, lion, man dancing; dot-rosette filling. Transitional?

(20) *Corinth VII*, i: all small Group A: pl. 25, 187 (all black with 'football' sections; red enhancement; early shape); pl. 28, 195 (siren, open curved wings); 196 (cock with open wings); 197 (walking griffon with open wings); pl. 33, 235 (panther-bird with open wings); 236 (grotesque stylised boucranion). All seem to be EC.

(21) Toronto, RHI: pl. 11, 157 (C 649): Group A; goose between cocks; EC. Pl. 12, 156 (C 648, fig. p. 46): Group A; lotus of solid type between cocks; neat style; EC. 158 (C 858, fig. p. 46): Group A; goat to r., head reverted, bull with lowered head to l., rosettes; heavy, fairly neat style; EC. 173 (C 242, fig. p. 51): large size example of Payne's Group C of MC; griffon-bird with open wings; thick filling; tongues on mouth and neck; dot-and-band above frieze; bands and tongues below. Pl. 102, 631 (C 936): small Group A, with the usual subsidiary decoration. Man in 'Knielauf' position to r., in belted tunic (herringbone pattern on front), short hose (with codpiece), with head reverted and arms raised; lizard between snakes with long tongues. Abundant use of added red and incision; dot rosettes and one incised. Curious style, especially the oval rendering of the eye. From Corinth. EC. There are two other alabastra, which seem to be of doubtful origin. (1) Pl. 13, 175 (C 227): pinkish buff clay; lotus-bud-palmette complex of curious type.

As the editors point out, it is not Corinthian. If the vase is, in fact, a Rhodian find, it may be a Rhodian imitation of Corinthian. A Boeotian product is hardly likely to have got so far. (2) Pl. 13, 178 (C 228): greenish-buff clay; the glaze is called ‘ dark brown ’, and the surface described as ‘ dingy ’. Tongues on the neck, two friezes divided by narrow bands, tongues on the base. In friezes: panthers, owl, goats, lion, swan. The photograph is poor, but the vase seems to be repainted. It might be Corinthian (Middle).

(22) Boston, Fairbanks, pl. 44, 448: Group A, siren with polos, and bird; 450: Group A, serpent between cocks, Payne compares *NC.*, nos. 277–9; 453: Group A, of broader shape, with eagle between panthers; Payne compares *NC.*, nos. 245 ff.; 454: medium type, with bands above and below the field; Boread and panther; some use of white dots; Payne compares *NC.*, no. 451; group of *NC.*, nos. 456 B–E? All EC.

(23) *Perachora* I, pl. 31, 1 *a–d*: Group A; tongues on mouth, neck and base; slanting red bars on the rim. In field: man (nude except for headband) leading deer (?) by a cord; flying bird; seated dog (?) with collar; lotus dependent from the handle. Payne notes the rarety of the latter ornament, the odd Italo-Corinthian appearance of the rosettes, and the curious blobs. EC? *Ibid.*, 3: circles on the mouth; tongues on neck and base; two friezes with crude silhouette animals and a mass of small blobs. ‘ Probably Transitional.’ Pl. 27, 7: fragment with Boread (?), with white dots, which may belong to a medium sized vase.

(24) *BSA* XXXIX (1938/39), 22. From the cave at Polis, Ithaka. Complete and fragments: 3, 4, 5, 7 (pl. 12, *a*), 8, 9, EC, with animals, Boread, etc. 10: ‘ later ’; 1, 2, 6, linear. Most not illustrated.

(25) Kourouniotes, Ἐλευσις 83, fig. 53 r., cock and duck; fig. 54 l., lion and swan; fig. 54 r., dolphin. These three inserted by Payne in the catalogue of his copy of *Necrocorinthia* under the numbers 274 A, 244 B, and 352 A.

(26) Delphi: Transitional fr., added by Payne as *NC.*, 69 C; ‘ good early fragment ’, as 326 C.

(27) San Francisco, Palace of Legion of Honour, 1614 and 1797, *CVA San Francisco*, pl. 2, 1 and 2: two Group A alabastra; EC.

(28) Princeton, *Record of Museum of Historic Art*, II (1943), 11: alabastron ascribed by Weinberg to the Sphinx Painter; EC.

(29) Perugia Museum 102 (376). Unpublished? Alabastron with three friezes, containing Boread, panthers, sphinxes, floral. Neat style, EC or early MC.

(30) Cambridge: Artemis with birds. Typhon Group.

(31) Newcastle, Black Gate Museum; ex. with double-bodied siren; good EC; Gorgon-Bird Group (?). Also linear alabastron, type of *NC.*, no. 377, fig. 121 *bis*, and large alabastron with lotus between two confronted cocks, LC.

(32) Sarajevo: alabastron (LC I) with two friezes of shielded warriors, in Bulanda, *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegowina*, XII (1912), 274, fig. 34, added to the group *NC.*, nos. 1228–32 by Amyx, 231, n. 114.

(33) The following scattered vases in the U.S.A. are mentioned by Amyx; 229, n. 64: alabastron (beginning of LC I) in the University Coll., Urbana, Ill., with cock, one wing outstretched; *ibid.*, 230, n. 78: alabastron in the John Herron Art Inst., Indianapolis, with panthers, similar to *CVA California* I, pl. 9, 1 and *NC.*, nos. 841 and 842 A.

(34) *BullMetrMus* 1938, 27 and fig. 2. Type A alabastron (acc. no. 37. 128. 2). Bird between lions; heavy style with fairly neat incision, EC.

(B) Add to Payne's list the following references[126]:

(1) *CVA Louvre* VI: pl. 2, 11–12: *NC.*, 313; pl. 3, 5–6: 348; pl. 2, 24–5: 359; pl. 3, 7–11: 794. Others refs. are given in *NC.*, 341; on some of the alabastra, see Amyx, 230, n. 90.

(2) *CVA Louvre* VIII: pl. 16, 5, 6, 11: *NC.*, 105; pl. 15, 15, 16, 22, 23: 208; pl. 15, 12, 13, 19, 20: 211; pl. 16, 3, 4, 10: 342; pl. 15, 28, 29, 33: 358; pl. 15, 10, 14, 18: 375; pl. 16, 15, 18, 20: 433; pl. 16, 13–17: 791; pl. 15, 24 and 32; 26 and 31; 27, 34 and 35; pl. 15, 25 and pl. 16, 7–8: Louvre exx. mentioned by Payne under *NC.*, no. 1204.

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[126] *NC.* numbers refer to the Catalogue.

(3) *CVA Louvre* IX: pl. 29, 7–8: *NC.*, 75 F; pl. 29, 11, 12–13, pl. 34, 1: 95; pl. 29, 16, 17, 18, pl. 34, 5: 102; pl. 29, 19, 20, 21: 223; pl. 30, 3, 4, 5, pl. 34, 4 and 6: 245; pl. 30, 26, 27, 28, pl. 34, 3: 274; pl. 31, 1 and 2, pl. 34, 2: 366 C; pl. 32, 1, 5–10: 382; pl. 31, 13–14, pl. 34, 8: 456 B; pl. 33, 1–6: 461; pl. 31, 15, 16, 17: 801.

(4) *CVA Oxford* II: pl. 1, 59: 253; pl. 1, 60: 234; pl. 2, 14 and 19, pl. 6, 4: 314.

(5) Langlotz, *Würzburg*: pl. 10, 94: *NC.*, 392 A; pl. 10, 99: 399; pl. 10, 101: 459; pl. 10, 98: 400; pl. 10, 100: 785; pl. 10, 96: 430.

(6) Bonn, A. Greifenhagen, *AA* LI (1936), 343 ff.: no. 4, fig. 2, inv. 25a: *NC.*, 72; no. 5, inv. 591: *NC.*, 374.

(7) Kourouniotes, Ἐλευσις 83, fig. 53 r.: *NC.*, no. 263.

(8) Buschor, *Griechische Vasenmalerei* (1940), 34, no. 41: *NC.*, no. 381.

(9) *Apollon* (Russian periodical), 1914, 9, pl. opp. p. 7 (given by Amyx, 230, n. 89): alabastron with Typhon, in Leningrad, mentioned by Payne under *NC.*, no. 389 (as replica of 389). Amyx states that it is not a replica but later, probably MC.

(10) Brants, *Leiden*, pl. 13, 44: *NC.*, no. 792 A.

(11) Dohan, *Philadelphia*, pl. 53: *NC.*, no. 457.

(12) *Coll. de M. E.* (*Vente Drouot* 2–4 *juin* 1904), pl. 3, 110: *NC.*, no. 1231 (Amyx, 231, n. 114).

(13) Boston, Fairbanks, pl. 44, 449: *NC.*, no. 89; pl. 44, 451: *NC.*, no. 103.

(14) Neugebauer, *Führer*, pl. 13 l.: *NC.*, no. 425.

Note that *NC.*, no. 75 F and no. 372 are the same vase, probably Transitional.

The variant shape with ring foot is rare. Two examples are listed by Payne in *NC.*, no. 456, from Delos, and 456 A (Louvre L 26), published *CVA Louvre* VI, pl. 4, 6, 8, 9, 11. There is another example Louvre L 27, published *ibid.*, pl. 4, 7, 10, 12, 13, which is by the same hand.

The other allied shape, the long alabastron, is common enough in East Greek fabrics, but uncommon in Corinthian. It is discussed by Payne, *NC.*, 286, who lists a few examples (nos. 468–72). To these may be added the following, which appear to be Corinthian rather than Italo-Corinthian:

CVA Sèvres I, pl. 14, 12 (inv. 6982): the clay is described as 'blanchâtre, surface jaune'. This is probably Corinthian; compare the panther's head with *CVA Oxford* II, pl. 5, 14 (olpe).

CVA Louvre IX, pl. 32. Four exx.: E 451 (pl. 32, 2), from Italy, with brownish clay, might be Italo-Corinthian; E 450 (pl. 32, 3), from Italy, 'argile verdâtre', and E 457 (pl. 32, 4), from Italy, 'argile jaunâtre claire', could both be inferior MC; CA 2960 (pl. 32, 11), no find place given, 'argile jaunâtre' with orange surface, is of a fairly neat common EC aryballos style.

Toronto, RHI, pl. 13, 180 (C 222): with five friezes of animals, and the usual subsidiary decoration; thick filling. The style seems to vary between a heavy style (top three friezes) and a rough miniature style (bottom two friezes). Buff clay. It seems fairly clear that the vase is Corinthian. EC/MC.

ARYBALLOI

The pointed aryballos type is not treated here among Corinthian vases. It is a Protocorinthian shape which lasted on into Early Corinthian (cf. *NC.*, 286), and even into the Middle Corinthian period. The examples mentioned by Payne, *NC.*, no. 802 A are related in their decoration to some of Payne's Middle Corinthian alabastra Group B, and certain other pointed aryballoi show a pronounced Corinthian style, hardly distinguishable from Early Corinthian; compare the group *NC.*, nos. 62 and 63 and the example in Braunsberg, *AA* XLVIII, 421–2, figs. 1–3, all of which are very close to Corinthian. They are, nevertheless, best treated with the Protocorinthian examples of the shape, which do not come within the scope of the present paper.

The variant types of aryballoi, their decoration and chronology are treated by Payne, *NC.*, 269, no. 18 (LPC, an exceptional example), 271, no. 30 B–30 C (LPC Shape A), 276, no. 114 A (Transitional, subsequently regarded by Payne as not Corinthian), 287–92 (EC), 303–5 (MC), 319–22 (LCI), 331 (LC II), and by Ure, in *Aryballoi and Figurines from Rhitsona.* The pot, *Perachora* I, pl. 31, 2, with a semi-horizontal handle, is a miniature hydria not an aryballos (see M. Robertson, *JHS* 1940, 102). The following observations may be made on the problem of accommodating Payne's chronology with that of Ure:

(a) *Payne's Shape A.* Payne gives two Protocorinthian (Late) examples of this shape (*NC.*, nos. 30 B and 30 C); it continued in the Early and Middle Corinthian periods (see note, *NC.*, 287). The Middle Corinthian examples are marked by later subsidiary patterns (*NC.*, 287), and by the later rendering of female heads. Payne emphasises the fact that it is sometimes difficult to distinguish between the Early and Middle periods in this shape (*NC.*, 287 and 303, under no. 803). Ure, 29 ff. would date this (Shape A) group (as also Payne's Groups B–D) to a somewhat later period than Payne's Group E, on the ground that in this Group A (as in Groups B–D) appear one or more of the following features—bounding lines above and below the field, white-dot decoration, rosettes with incised centres, crescent-wheel (or whirligig) ornament on base—which he finds characteristic of his middle period (Group b graves). He admits, however, that bounding lines and rosettes with incised centres do occur in Early Corinthian, but regards them as ‘ preluding the beginning of a later phase ’. However since Payne avoids laying down any hard and fast rules, and Ure dates his middle period 605–590 B.C., there is no essential contradiction between the two views.

(b) *Payne's Group B.* See *NC.*, 288, fig. 124, for details of subsidiary decoration; the frieze always has thick filling ornament. Payne describes the style of this group as ‘ sometimes pretty, often distinctly archaic ’. Two examples were found in graves of the late seventh century (*NC.*, nos. 491, 519). The less elaborate decoration of the ‘ Lion ’ Group (fig. 125) certainly seems somewhat later (*cf.* the smaller tongues on the mouth, and the fact that they are no longer red and black). Payne points out (*NC.*, 289) that Group D (Lion Group) has a liking for white dots, which do not appear in Group B. He therefore concludes that the Lion Group lasted longer, continuing into the Middle Corinthian period, as the late type of some of the floral patterns shews. He makes no attempt to distinguish between Early and Middle Corinthian examples in either group (cf. *NC.*, 304, II, Shape B, A). As in the case of Payne's group of Shape A, Ure (29 ff., 31 ff., 33–4) criticises the attribution of Groups B and D in general to the earliest period, since in them appear the details (bounding lines; ' wild profusion of rosettes ' (many with incised centres), use of white dots in Groups C and D, crescent wheel pattern on base) which he regards as foreign to the earliest period. He suggests (p. 31) that some of this material may even be good work contemporary with his third period, but this is not striking, since he dates this 590–70 B.C. In grave 86 at Rhitsona (' one of the latest of Group c graves '), he divides thirty-seven of the thirty-nine aryballoi found into three groups, of which (1) corresponds to Payne's Group D (fig. 125). The other two groups, *i.e.*, (2) with well-drawn animals and careful rosettes (having one or two circles incised in centre and incision separating petals), lip and bottom with plain bands, shoulder and back of handle plain, and (3) with subsidiary decoration as (2), but animals more carelessly drawn and amorphous field rosettes, Payne would have called Middle Corinthian, as far as the subsidiary decoration is concerned, some perhaps Late Corinthian (like Ure's Group iv, which does not appear in grave 86). The seven vases of Payne's Group D from this tomb are worn, and Ure admits that they are earlier than the other groups, also that they are far from the best of the series, and may well be among the latest of Group D. If he then dates the tomb to 570 B.C., there is little divergence from Payne's views.

It would appear that, as Payne maintains (*NC.*, 289), the Warrior Group (B) begins earliest, and overlaps the Lion Group (D), which in turn leads on to Late Corinthian—Ure's Group c aryballoi (characterised by ' prevalence of simple bands for subsidiary decoration; partial or complete discarding of the type (a) rosette; tendency towards stylisation '). The Italian and Sicilian finds and Rhitsona grave 86 may show the association of Payne's Group D aryballoi with Ure's Group c, without necessarily dating the whole of Group D.

(c) *Payne's Group E.* See *NC.*, 290, E. Ure regards these as corresponding to Payne's alabastra, Group A, *NC.*, nos. 208 ff., and gives them the corresponding place, *i.e.*, earlier than Payne's Groups A–D of aryballoi. Ure describes them (*op. cit.*, 29 ff.) as aryballoi of refined style, with animal decoration in a free field; petals (generally red and black) on the mouth, neck and base; no bounding lines; the rosettes have plain crossing incision, and no incised centres except in two examples (97. 7 and 14. 16); the back of the handle has either horizontal bands or a vertical zig-zag line, but is never plain or with two vertical lines. The examples illustrated by Ure are ill-preserved, and are not certainly early (*op. cit.*, 30 and pl. VI). *Note:* Among the Perachora examples occur (i) double-centred rosettes; (ii) white dots; (iii) edge of mouth with concave profile (late type); (iv) an example related to the Chimaera Painter; (v) an example with floral complex (quadruple palmette), with late mouth type (hollow); but this example has circles on mouth and base, and so probably belongs to Ure's Group c.

(d) *Flat-bottomed.* See *NC.*, 291 (III, shape C) for a general note on the flat-bottomed type, where Payne points out the difference of shape between those of the Early period, represented in his catalogue only by linear examples (which from lack of evidence to the contrary he confines to the seventh century), and those of the Middle and Late periods, characterised by a broader foot and by being proportionately taller. He lists no large figured or linear examples from the Early Corinthian period; for those of the Middle period, cf. *NC.*, 304–5; and of the Late period, 321. The finds at Rhitsona afford substantially the same dates (Ure, 35–6). Ure points out (p. 23) that the linear type (such as *NC.*, fig. 162) appears first in a Group b grave (p. 14), in Group c (86), and is common in the early ' Boeotian-kylix ' graves (*i.e.*, after 570 B.C.).

(e) *Aryballoi with Procession of Round-shielded Warriors.* Payne lists a few early examples among the Warrior Group (*NC.*, nos. 517–19). The extremely naturalistic examples in Oxford (*CVA Oxford* II, pl. 2, 6, 10, 43), the second of which is somewhat similar to an example from Perachora, do not really belong to this group of ' warrior-procession ' aryballoi. The later examples are discussed by Payne, *NC.*, 320, B, nos. 1244–9. A considerable number were found at Rhitsona (Ure, 38–41). One example from a Group a grave (91. 19; *ibid.*, pl. VIII) differs from the rest in having petals without bands on the top of the mouth, no decoration on the shoulder, and a small ring of dots on the base; there are no bounding lines to the frieze. It thus possesses all the characteristics of the animal and floral aryballoi from the Group a graves, but since there are white dots on the shields it cannot be early in the group, if Ure's views on white-dot decoration be followed in dating it. Even so it seems more crude than many examples in other ways clearly later, such as Munich, *SH.*, pl. 9, 308.

Ure's Group b grave type has bands on the top of the mouth, petals and bands on the shoulder, bands below the main zone, dots on side of mouth, and either horizontal bands, vertical bands or zig-zag on the back of the handle. The filling of the frieze comprises dot rosettes, amorphous incised rosettes and ‘ hailstorm ’ filling. This group is characterised by variety of treatment, and by the relative care with which the warriors are depicted.

The examples occurring in Group c graves represent the final stage of uniformity and standardised slovenliness. The side of the lip is decorated with bands, rarely with dots; there is no field ornament. The examples with shield signs occur in Group b; the shields of Group c are in silhouette with an incised circle inside the rim. They do not occur in the Boeotian kylix graves (*i.e.*, after 570 B.C.). One occurs with Fikellura at Makri Langoni, gr. 192 (*Clara Rhodos* IV, 338, fig. 374).

(f) *Quatrefoil Aryballoi.* For the evolution of this type, cf. *NC.*, 146–8; 287 (on the early Corinthian examples); 320–1 (on the later type). The types appearing in the Rhitsona graves, Groups a–c, are discussed fully by Ure, 43–5. They become common only in Group c graves. For the type *NC.*, fig. 54 H, *cf.* the krater *CVA California* I, pl. 7, 1 a–e, where it appears as a shield blazon and at a date earlier than that suggested by Payne, *NC.*, 148. See also Ure, 46, no. 2.

(g) *Aryballoi with Cinquefoil Ornament, etc.* Cf. *NC.*, 148. Cinquefoil and sixfoil aryballoi were found plentifully at Rhitsona in Group c graves, and in the graves of the succeeding period. Their period is said by Ure to coincide with that of the Group c graves, and with the very earliest of the Boeotian kylix graves (*i.e.*, Payne's MC–LC). They appear later and disappear earlier than the quatrefoil type. A large example from Perachora seems early, and some of them must be earlier than the date suggested by Payne, *NC.*, 148, *i.e.*, last quarter of the sixth century.

(h) *Black-polychrome* (‘ *Football* ’ *or* ‘ *Orange-quarter* ’ *type*). For the dating of this type, cf. *NC.*, 291, and Ure, 23. The type *NC.*, 291, fig. 126 (note that such decoration appears on pointed aryballoi also) was found at Rhitsona in Group b graves, but not in Group c graves. The flat-bottomed type (*NC.*, fig. 162), generally with bands above and below the stripe decoration, appears first in a Group b grave, then in Group c, and is common in the succeeding period (Boeotian kylix graves). In view of the fact that this type of decoration appears also in bands on other types of vase (*e.g.*, large alabastra), it is not certain that it is derived from the earlier type of ‘ football ’ aryballos.

Considerable quantities of aryballoi have been published since the appearance of *Necrocorinthia*, and many new examples have been found, since they are among the commonest vases occurring in excavations. Few of the recently published or lately found examples add anything to what is said in *Necrocorinthia*, but the following are perhaps worthy of special mention:

(1) *CVA Bibl. Nat.* I: pl. 13, 23: an unusually neat example of the type with a frieze of shielded warriors; dot rosette in field. EC.

(2) *CVA Louvre* VI: pl. 5, 7–10 (CA 63): Not *NC.*, no. 574, as Payne states *ibid.* 341. Group G (as *NC.*, no. 609 ff.), with panther-bird and swan, belonging to the Panther-Bird Group. Pl. 5, 17–20 (MNB 631): f.b. ex., with two friezes in heavy MC style, of the same period as *NC.*, no. 827.

(3) *CVA Louvre* VIII contains a large selection of various types, a considerable number of which figure in Payne's catalogue. None of the rest (pls. 17–21) is of great interest except pl. 20, 1–4 (A 473), with the suicide of Ajax. This may be added to *NC.*, no. 1258 A.

(4) *CVA Musée Rodin*, pl. 3, 5 (No. 539): f.b. ex., with lion and swan; tongues around neck only. Plaoutine calls it MC, but it might well be early. The shape is MC, but the frieze lacks bounding lines. Pl. 4, 1, 6, 8 (No. 505): f.b. ex.; subsidiary decoration as *NC.*, fig. 140 *bis*; two padded dancers flanked by sphinxes. It belongs to Payne's group *NC.*, no. 841 ff. Pl. 4, 9–11 (No. 870): small Group B (as *NC.*, no. 488 ff.); bearded serpent-dragon, with wide-open mouth showing teeth. Roughly drawn lotus-filling between the curves of the serpent. Crude style. Plaoutine groups it with *NC.*, nos. 1233 ff.

(5) *CVA Oxford* II: pls. 2, 1 and 6, 10 (1928. 315): Group E (as *NC.*, no. 564 ff.); man running to r.; on his chiton are incised two acrobats, the one crouching and the other turning a somersault over him. Very neat EC style. Pl. 2, 10 (G 184): Group B (as *NC.*, no. 488 ff.), with marching hoplites. EC/MC. Inferior to *NC.*, no. 525. Pl. 2, 21 and 43 (1877. 119): Group B; lion and shielded hoplites, with dot-rosette filling. Payne dates it to the first half of the sixth century.

(6) *CVA Hague* I: the following are not in *NC.*, Cat., though references to this fascicule are incorporated in that work: pl. 5, 14 (inv. 1863): late Group E (as *NC.*, no. 564 ff.), with curious palmette and bud complex, which may be the origin of the ordinary quatrefoil. Pl. 6, 3 (inv. 3309): f.b. ex.; no bounding lines at the top of the frieze; goat in the frieze, with double line in shoulder complex. MC.

(7) *CVA Hague* II: pl. 7, 5 (inv. 600): Group E (as *NC.*, no. 564 ff.), with confronted lions. Not far from the style of the Mykonos Painter (*cf.* the ' palmette ' noses).

(8) *CVA Poland* I (Goluchow), pl. 6, 7 *a–b* (inv. 7): Group B (as *NC.*, no. 488 ff.); hare between riders, man in long chiton. EC–MC.

(9) *CVA Robinson Coll., Baltimore*, pl. 14, 9: Group E (as *NC.*, no. 564 ff.), with warrior duel. Notable for the detail in added red on the cuirass.

(10) *CVA Providence*, pl. 5, 2 *a–b* (C 215 b): Group D (as *NC.*, no. 538 ff.); quadruple palmette and lotus-bud complex; the palmette petals have ' nipple ' ends. Neat arrangement of floral pattern. EC.

(11) Dugas, *Délos* XVII, in which is published the pottery from the ' Fosse de la Purification ' on Rheneia, contains a considerable number of aryballoi, but none of them is of outstanding merit or interest. They may be classified as follows: Early Corinthian, Group B (as *NC.*, no. 488 ff.): pl. 54, 17, 19, 23; pl. 55, 14, 15, 22, 24, 25, 26; Group D (as *NC.*, no. 538 ff.): pl. 56, 33; Group E (as *NC.*, no. 564 ff.): pl. 54, 8, 9, 10, 16, 20; pl. 55, 12, 13, 21; pl. 56, 34; Group G (as *NC.*, no. 609 ff.): pl. 56, 30, 31, 32, 35; 'football' type: pl. 54, 7; pl. 55, 6. Middle Corinthian, Group B (as *NC.*, 304, II, Shape B, A): pl. 56, 38; f.b. Group B (as *NC.*, no. 821 ff.): pl. 56, 36 and 37. Late Corinthian, Group A (as *NC.*, no. 1233 ff.): pl. 54, 18; quatrefoil: pl. 54, 11.

(12) *CVA Rodi* II: most of the aryballoi published pls. 3, 6, 7 and 8 are of no great interest, but the following may be noted: pl. 3, 7 (inv. 10690): large f.b. ex. of the ' Scale-pattern ' Group; *Clara Rhodos* III, 47, pl. VII, from Ialysos, gr. 261. Pl. 3, 8 (inv. 5175): large f.b. ex., with lions flanking lotus-palmette complex. Close to *NC.*, no. 835.

(13) *Clara Rhodos* IV: Makri Langoni, gr. 4, 8, fig. 22: small f.b. ex. of very neat EC style; its context also indicates an early date. It is unusual in that it combines polychrome-on-black incised shoulder petals with incised verticals on the body. (Note that *Clara Rhodos* VI–VII contains no aryballoi of any interest.)

(14) *Clara Rhodos* VIII: Ialysos excavations, 1934; Marmaro, gr. 1: large f.b. ex. (figs. 52 and 55), with floral between confronted panthers. Rough MC.

(15) *CVA Taranto* II, pl. 2, 5: aryballos from a grave in the Via Regina Elena, 13/9/30;

no tongues around neck or bounding line above the frieze; three narrow bands and whirligig around base. Boread (curved wings only) running to left; some white dots; no filling. Fair style; EC. Pl. 2, 6: f.b. Group B (as *NC.*, no. 821 ff.). Thin tongues around neck; two narrow bands above frieze; in field, two confronted bull protomes. Heavy style with limited detail, carefully incised; rosette filling. Early MC.

(16) Here may be mentioned a number of interesting exx. in Taranto Museum, as yet unpublished: (*a*) Madre Grazia, 12/3/20. Fine Shape A (as *NC.*, no. 480 ff.); combat over a fallen warrior, flanked by a running figure and a horseman. Rather broad style EC, *c.* 600 B.C. (*b*) Sta. Lucia. Shape A, with outline head on handle; on body, very complicated quatrefoil. MC. (*c*) Sta. Lucia. Ordinary MC–LC type, notable for panther with rough goat's head over centre of back. Variant form of Chimaera? (*d*) Soliti, 25/2/11 (inv. 5428). Large f.b. ex., with scale-pattern and animal frieze. Very close to MC ' Scale-pattern ' Group. (*e*) Vaccarella, gr. 72, 6/12/26. Giant octofoil aryballos. (*f*) Via Regina Elena, 13/9/30. Large ex. with lizard between panthers. Akin to the style of the Dodwell Painter. (*g*) Via Anfiteatro, from a ' tomba arcaica '. Large spherical ex., with panthers, and lotus quatrefoil with panther's mask as centre.

(17) Schaal, *Bremen*, pl. 3, 6: large f.b. ex., with usual subsidiary decoration; in frieze, fine cock (with exaggerated tail) and lion. No filling. MC.

(18) Langlotz, *Würzburg*, pl. 10, 108: LC ex. similar in style to *NC.*, no. 1255; pl. 11, 110: large MC f.b. ex., with confronted female (or youthful male) and bearded male heads. There is a large rosette with elaborately incised centre between the heads, a palmette ' grows ' from the base line, and on the back of the vase are two buds vaguely reminiscent of Chalcidian. For the general type of decoration, cf. *NC.*, no. 844.

(19) Bonn, A. Greifenhagen, *AA* LI (1936), 343 ff.: No. 10 (inv. 813), fig. 13: f.b. ex.; tongues and dot-and-band on shoulder; band below field. In frieze, curious combination of swan, man in chiton and mantle with spear, ' Knielauf ' Boread, and panther. Limited filling. MC. Dot-and-band decoration is rare on aryballoi; Payne illustrates one example, *NC.*, no. 114 A, later rejected by him as non-Corinthian; there is another in Taranto (Arsenale Excavations, gr. 114, 29/11/08), with chevrons on rim, tongues and dot-and-band on shoulder, dot-and-band and whirligig on base; in the frieze is a lotus floral between griffons, and large rosettes with pointed petals alternately red. The style is curious and the vase may be an imitation of Corinthian.

(20) *BMQ*, 1933/34, 109, and pl. 35 *g*: MC Shape A (as *NC.*, 803 ff.), with a battle scene; two female heads on the base, within triple concentric circles. By the same hand as the aryballos with boar hunt in the Louvre (*NC.*, no. 806), and the three with heroic battles in Vienna (*NC.*, nos. 807–9). *Ibid.*, 1935/36, 9 and pl. 3 *a*: aryballos of LC shape, with Herakles shooting at a Centaur. A short portion of ground line is placed under each figure. Cf. (37) below. Silhouette style, with no incised detail or added colour, and no filling. Peculiar style, certainly later than the date given by Pryce, ' *c.* 600 B.C.'.

(21) Amyx, pl. 29 *d* and *f*, and 216 ff. (SSW 9959): f.b. ex., with subsidiary decoration as *NC.*, fig. 140 *bis*. In frieze, lotus-palmette floral between confronted cocks, swan. Heavy MC style. Amyx discusses its connection with the Chimaera Painter and related groups. Pl. 31 *d*: Group G (as *NC.*, no. 609 ff.) ex. in the Detroit Institute of Arts; bull and panther in the field. Fine heavy MC style.

(22) Blinkenberg, *Lindos*, I: pl. 50, 1131: Warrior Group (B) ex., with warrior combat. Neat style; EC. Pl. 50, 1133: Group B (as *NC.*, no. 488 ff.), with padded dancers. Mediocre style; MC. Pl. 51, 1138: LC I spherical ex., with siren. Of the same group (see Amyx, 230, 83): *CVA Brussels* I, pl. 1, 22; *CVA Madrid* I, pl. 3, 5 (sphinx); Ure, pl. 7, 145, 13–15; *MA* XXXII, pl. 88. 2.

(23) *CVA San Francisco*: pl. 2, 3: Boread, EC of Group E (as *NC.*, no. 564 ff.); pl. 2, 4: padded dancers, LC I, by the same hand as *NC.*, nos. 1250, 1253; pl. 2, 5: f.b. football aryballos; pl. 3, 1: sphinx, LC I, group of *NC.*, nos. 1233–43 D.

(24) *Corinth VII*, i: pl. 28, 192: Group E (as *NC.*, no. 564 ff.), lotus and volute motif between sphinxes, EC; 193: Lion Group (D) (*NC.*, fig. 125), Boread (curved wings only) to r., red enhancement and white-dot borders, no filling, EC; 194: Group E (as *NC.*, no. 564 ff.), swan with outspread wings, as *NC.*, nos. 585 ff., EC; 202: Group E, lion to l., and

another figure which is lost, coarse heavy style, EC; 203: Group E, panther to left, incised circles on neck, neat incision, EC; pl. 33, 238: Group E, octofoil of alternate round and lanceolate ‘ leaves ’ (cf. *NC.*, 147, fig. 54 H, but the lanceolate leaves are not so long), EC?; certainly not very late as Payne infers, *NC.*, 148; 239: Group E: two padded dancers, rosette filling, mediocre EC/MC; 240: Group B (as *NC.*, no. 488 ff.); note shape with sloping shoulders; shielded warriors; 241: Group B, fragment with two friezes, (i) animals, (ii) frieze of identical birds, EC?; 242: fragment of Group B, two confronted male (?) figures with raised arms, thick filling, EC?; 243: fragment of Group B with lion and bird, EC?; pl. 41, 330: fragment of f.b. aryballos originally with cocks, floral (?) and swan, MC; pl. 43, 363: LC Group A (as *NC.*, no. 1233 ff.), goat (?) between lions, no filling; 364: late septafoil; 361 and 362: Group B, inferior shielded warriors; 365 and 366: linear, band decoration.

(25) Toronto, RHI: pl. 12, 166 (C 652): Group B (as *NC.*, nos. 488 ff.); fairly early ex., with shielded-warrior procession; 169 (C 488): LC I Group B; later type with shielded warriors, crude style, no filling; 170 (C 489) and 171 (C 491): Group B (as *NC.*, no. 488 ff.); padded dancers, rather rough style; 162 (C 236): later Group B (?); panther, bird, rosettes. MC?; 161 (C 231): Group D (?) (as *NC.*, nos. 538 ff.); tolerably neat style; man striding to r., with greaves and spear, holding a rearing horse; opposed to him, three warriors striding to l., with Corinthian helmets, shields (two eagle blazons and a whirligig) and greaves; only one has a spear according to the drawing, fig. 161, p. 48; one rosette; lotus-palmette ornament with streamers. EC? The following may not be Corinthian: pl. 12, 168 (C 234). From Castel d’Asso, near Viterbo. Payne’s Shape B 1. Dot-and-band below the tongues on the shoulder. In frieze: long-beaked bird, horseman to r., monomachy, sphinxes to l. Thick filling. Narrow bands and whirligig below. Very crude style. Doubtfully Corinthian. It may be Etruscan (*cf.* the shoulder complex of the horse), closer to Corinthian than is usual. *Ibid.*, 163 (C 233): also from Castel d’Asso. Payne’s Shape B 1. The photograph is too small to make out the style, but on the mouth is a rosette incised in black glaze (*cf.* the Etruscan pot, no. 172). In the frieze, curiously drawn goats. It may belong to the same style as no. 168. The following is certainly not Corinthian: pl. 12, 167 (C 653). Purchased in Rome. Spherical with rather small mouth and long neck. In the frieze: warriors with helmets (long crests), shields and spears; ‘ hailstorm ’ filling. On the mouth, chevrons; on the shoulder, short strokes; ‘ wave ’ pattern below the frieze. Etruscan of the later b.f. type.

(26) Boston, Fairbanks, pl. 44, 458: may be LC I; 460: swan between cocks, EC, Group E (as *NC.*, no. 564 ff.); pl. 45, 461: panther-bird with open wing, EC, Group E; 463: panther-bird with open wing, heavy style, thick filling, early MC, Group E; 465: eagle between swans, MC, f.b. type; 462: siren and swan, LC I. Pl. 41, 384, from Assos, uncertain object between swans, may be an imitation of Corinthian; note the brick-red clay.

(27) *Perachora* I, pl. 25, 3: quadruple lotus with connecting curves; probably MC. Pl. 30, 25: linear, with tongues, bands and dot-and-band. Pl. 30, 27: inferior floral; double palmette and streamers. Pl. 31, 4: tongues on shoulder and base; swan with open wings; EC? Pl. 32, 4: football aryballos fragment; black, red and yellow (?) sections. Pl. 32, 21: f.b. ex.; tongues, bands and incised stripes. MC?

(28) Athens, Kerameikos: two riders flanking floral; add to Lion Group after *NC.* no. 552.

(29) Athens 283, *AA* 1933, 422, fig. 5: f.b. ex., LC I; add after *NC.* no. 1272.

(30) Zurich, Private Coll.: f.b. ex.; crouching lion to l.; good style. Bloesch, *Antike Kunst in der Schweiz*, pls. 8–9. Assigned by Bloesch to the Painter of *NC.* no. 762, but perhaps MC rather than EC.

(31) University Coll., Urbana, Illinois: f.b. ex., with male head between panthers, by the same hand as *NC.* no. 827. Mentioned Amyx, 230, n. 75.

(32) Brants, *Leiden*, pl. 13, nos. 14 and 21: f.b. exx., with sirens; LC I; mentioned by Amyx, 230, n. 82. Others of the same type, also mentioned by Amyx: *CVA Copenhagen* II, pl. 87. 3; Coliu, *Musée Kalinderu*, 35, figs. 15–16; Libertini, *Catania, Il Museo Biscari*, pl. 67, 628; an example in the Univ. Coll., Urbana, Illinois. All similar to *NC.*, nos. 1264–72.

(33) *Hesperia* IX (1940), 162, fig. 13, no. 30. Athens, North Slope. F.b. aryballos with scales, as *NC.*, no. 643: EC.

(34) *BSA* XXXIX (1938/39), 22–4. From the cave at Polis, Ithaka. A considerable selection representing most types, spherical and f.b. Mostly described but not illustrated. *Note:* 16 (pl. 11 *a*), fair style EC. Warrior Group; 17 (fig. 12): neat Boread (curved wings only), with white dots; Lion Group; EC; 31 (pl. 11 *b*): late shape; overall decoration with female head in part outline, in ring-vase style (MC/LC). Miss Benton also quotes an example with silhouette helmeted head in a private collection in Ithaka (p. 24, n. 2).

(35) Neugebauer, *Antiken*, pl. 62: 150, f.b. aryballos with scale pattern and animal frieze. Distant relation or crude ex. of Scale-pattern Group. 151: f.b., less flattened shape than 150. Bands and single frieze with swans and griffon-birds. Late MC/LC I.

(36) *AA* 1939, 543, 545, figs. 1, 5. Budapest, private collection. Warrior Group. In frieze: goat, swan, flying bird between sirens; fairly thick filling. Attractive style; exceptionally neat incision. Group of *NC.*, no. 520 ff. EC.

(37) Feytmans, 18 and pl. III, 2. Aryballos either of Lion Group (without ornament at base) or Type E (with no filling). Boar to r.; fine careful incision. Note red (?) line outlined with incision as 'ground line'. Good EC.

(38) Nicholson Museum, Univ. of Sydney, *Handbook*² (1948), 261, fig. 46 (47. 08). Neat EC. of Warrior Group, with panthers, sphinxes and swan in frieze.

Add to Payne's catalogue the following references [127]:

(1) *CVA Louvre* VI: pl. 6, 9–12: *NC.*, 499; pl. 6, 5–8: 810.

(2) *CVA Louvre* VIII: pl. 17, 3, 6, 7, 9, 10: *NC.*, 614; pl. 17, 16, 17, 19, 20: 511; pl. 17, 21–5: 847; pl. 18, 13–16: 544; pl. 18, 17–19: 1243 A; pl. 18, 26–8, 30: 543; pl. 19, 1, 3 and 9: 540; pl. 19, 2, 7 and 8: 545; pl. 19, 21–5: 1260; pl. 19, 28, 29, 31, 32: 552; pl. 20, 5–7: 546; pl. 20, 11–14: 557; pl. 20, 20–2: 558.

(3) *CVA Cambridge* I: to Payne's notes, *NC.*, p. 343, add pl. 5, 18: *NC.*, 837.

(4) *CVA Oxford* II: pl. 6, 7–8, 12, pointed aryballos: *NC.*, 9; pl. 2, 2 and 7: 485 A; pl. 2, 3: 563 A; pl. 2, 4: 638; pl. 2, 5: 523; pl. 2, 6: 526; pl. 2, 9: 560 D; pl. 2, 41: 1263; pl. 4, 6: 1273; pl. 4, 7: 849; pl. 5, 1 and 5: 831.

(5) Langlotz, *Würzburg*: pl. 9, 105: *NC.*, 1255; pl. 10, 107: 604; pl. 12, 106: 496 B.

(6) Bonn, A. Greifenhagen, *AA* LI (1936): no. 11, inv. 335, fig. 11: *NC.*, 855.

(7) Boston, Fairbanks: pl. 44, 459: *NC.*, 577; 464: 1258 A; 466: 621 A; 467: 1282; 468: 1264.

PYXIDES WITH CONCAVE SIDES

The shape of the concave-sided pyxis is discussed by Payne, *NC.*, 292, where he notes the tendency of this, like other shapes, to become taller in proportion to the breadth as the Corinthian style develops. He lists the following examples as possibly later than EC: *NC.*, no. 652, probably MC; no. 664, EC or MC; no. 860 B, MC or perhaps LC. In addition *NC.*, no. 647 (*CVA Hague* I, pl. 2, 7), a pyxis with a fairly pronounced curve, called EC by Payne, must be MC, and fairly close to *NC.*, pl. 28, 11 (no. 889). Some of the fragments from Perachora are certainly later than Early Corinthian.

The following examples conveniently gathered together in the same volume of the *Corpus Vasorum Antiquorum* illustrate that difference of shape and quality of decoration which exists between the Late Protocorinthian and Corinthian types. *CVA Brussels* I, pl. 3, 1 *a–c*: the animal frieze is Middle Protocorinthian in style (cf. *NC.*, 14), the sides are slightly concave, representing the first modification in shape from the Protocorinthian cylindrical pyxis (such as *CVA Copenhagen* II, pl. 82, 13); the subsidiary decoration is very neat, especially the carefully drawn triangles around the base. *Ibid.*, pl. 1, 3 *a*: with Late Protocorinthian style silhouette animals; of much the same shape as the foregoing (*cf.* also *CVA Copenhagen* II, pl. 89, 2, with the same type of silhouette animals; the lid does not belong). In the pot, *ibid.*, pl. 1, 6, called Late Protocorinthian by Payne (*NC.*, no. 55), the sides slope slightly inwards from the base to a point about one third from the rim. The linear decoration is very neat; the lid is flat and the knob a simple truncated cone. All the foregoing are of a relatively shallow type. With them may be contrasted, *ibid.*, pl. 1, 2 (*NC.*, fig. 129), the Corinthian type, with pronounced concave sides. The decoration is neat, though the base triangles are not so well drawn as in Late Protocorinthian. The lid is still quite flat, to judge from the *CVA* photograph, though Payne (*NC.*, fig. 129) shows it as domed, which is generally the Corinthian form. The knob has a button top and bulges slightly. *CVA Hague* I, pl. 2, 8 (*NC.*, no. 658) with a slightly curved side, may be placed between the Late Protocorinthian and Corinthian types, as befits the style of its decoration also, which is akin to the heavy late Transitional style of a Perachora lid. The Hague (now Amsterdam, Allard Pierson Museum) example is said by Payne to belong to a group (*NC.*, nos. 653–8) all by the same hand (in *NC.* read ' Munich, *SH.*, 329–31 ' for ' 328–31 ' included in this group). This is doubtful. Munich, *SH.*, 331 is not illustrated; 329–30 may have some connexion but are later and further in style from the Hague example than is the Perachora lid.

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[127] *NC.* numbers refer to the Catalogue.

There is a variant form with strap-handles placed at the centre of the sides; cf. *NC.*, no. 666 and *CVA Fogg Museum*, pl. 4, 9, 11–12. See below on pyxis-kalathoi. There is also an odd shape akin to a powder pyxis lid, see below, p. 217, note.

To Payne's list add the following:

(1) *CVA Louvre* VI, pl. 10, 6–9 (MNC 668). Strongly concave sides and flat lid; the knob is of the usual type. Animal frieze of a peculiarly attenuated type; scrappy filling. Probably MC. Mentioned by Payne, *NC.*, 341, who compares *NC.*, no. 860 B, which may be LC I.

(2) *CVA Oxford* II, pl. 1, 55 and pl. 3, 10 (1927.6). With silhouette frieze. Note especially the lid, with dot rosettes, the dots run together. Nothing can be added to Payne's observations (*loc. cit.*) except to point out that dating from the shape is, in this case, hardly valid, especially the assumption that in the sixth century no pyxides of this sort were made, and therefore this must belong to the seventh century. On the silhouette style, see above, pp. 190 f. and n. 123.

(3) *CVA Poland* I (Goluchow), pl. 6, 3 (inv. 2). With very crude silhouette animals. Period doubtful.

(4) *CVA Madrid*, pl. 1, 18–19. Two exx. with lids. Shape fairly early. Neat dot-and-band and band decoration. Lids only slightly domed, with heavy knob.

(5) *CVA Univ. of California* I, pl. 3, 8 (8/3410). Complete with lid. The body is

slightly concave; the lid slightly domed, with usual knob. Broad bands (overlaid red) and narrow bands on the body. Neat style. Early.

(6) Dugas, *Délos* XVII, pl. 58, 115. With pronounced concave sides. Zig-zag on rim; bands on body; reserved zone with vertical zig-zags and dot rosettes around the middle of the body. MC? 116: sides slightly less concave. Bands around rim; band and rough triangles around base; incised verticals between. 117: fragmentary ex. Narrow band below rim, narrow bands and rough triangles around the base. In field, remains of goat and lion, with dot-and-circle filling. Somewhat similar to the style of the Perachora lid mentioned above.

(7) *AJA* 1930, 541, fig. 21. Of early shape with the narrowest diameter about one-third down the side. Groups of vertical wavy lines between the handles; narrow bands replacing the more usual rays around the base; the rest covered with broad bands and dot-and-band. Slightly domed lid with heavy knob. Found beside grave 139 in the North Cemetery at Corinth with a group of vases covering the periods EC to LC I. Probably the earliest vase in the group.

(8) *AJA* 1931, 14, fig. 10. With zig-zags between bands on rim; two broad bands above and below the frieze; triangles around the base. Lion and bull in field. EC.

(9) *Perachora* I: most interesting are the fragments of this shape decorated in black-polychrome; pl. 26, 9: with tongue and scale pattern (scales down-turned and with double outline); pl. 32, 3: with vertical zig-zags, narrow bands and scales with dots between double arcs, of LPC date. This is a rare form of decoration in pyxides, though a number of lids occur with scale pattern. Pl. 33, 14: with dog-tooth, incised double verticals (some with red enhancement and white dots) and a band; a much commoner type. EC? Pl. 30, 15: band decoration. Pl. 32, 13: fragmentary, with dog-tooth and silhouette animal frieze (blob filling) between narrow bands; band at rim. EC? Pl. 27, 11: fragment with head of stag in incised style; blobs. Late Transitional/EC.

(10) *AA* 1934, 206, fig. 4. From the Kerameikos, Athens. *c.* 600 B.C. Related by Kübler to Munich, *SH.*, no. 330 (*NC.*, no. 654). See above on the supposed group *NC.*, nos. 653–8.

(11) *AA* 1938, 496 and fig. 24, from a chamber tomb in Aegina. Trans./EC linear pyxis, found with ‘ Samian imitation ’ of lydion.

(12) Boston, Fairbanks, pl. 47, 484: ex. and lid with ring handle. Decoration of body destroyed.

(13) Unpublished in Taranto: (*a*) Vaccarella, gr. 258: with strap-handles at side and rim thickened; lid of usual type. Found with an alabastron with lotus-palmette floral (probably EC) and a poor MC kotyle. (*b*) Corti Vecchie, 28/1/14: two small linear exx. with lids. Found with a straight-sided linear powder pyxis and lid, two polychrome Laconian aryballoi, and MC pottery.

Note: *NC.*, no. 860 B is now published *CVA Louvre* VIII, pl. 23, 7–9.

LIDS. In museum publications the flat or slightly domed lids of concave and convex pyxides rarely appear separated from the bodies of such vases. Excavated sites, however, afford numerous examples. Thus only in a very few cases do any of the very large number of pyxis lids found at Perachora seem to belong to the concave or convex pyxis fragments from the same site. The same great preponderance of pyxis covers over bodies appeared also at the Argive Heraeum (*AH* II, 136).[128] Johansen (*VS*, 32) suggests that the lids were used as covers for vessels other than pyxides. This may be true in the case of the Protocorinthian, but hardly of the Corinthian period. Some lids might belong to tripod pyxides, though well-decorated examples of this shape, which the lids might fit, are rare. It is not likely that the lids were dedicated separately. Lids may indeed have been preserved in domestic use, as makeshift covers for other vessels, long after the bodies were broken; *cf.* grave 178 of Kamiros (*Clara Rhodos* IV), where two trefoil oinochoe lids appear among the other Corinthian pottery, though no trace remains of the oinochoai. Here, however, the lids may have been used as small lamps. It must be concluded either that the bodies have been lost or that they have been broken into fragments too small to permit any connection with the lids.

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[128] *Cf.* also Ithaca, M. Robertson, *BSA* XLIII, 31.

When the knob is lost it is difficult to decide whether lids belong to concave or convex pyxides. As far as the section of the lid is concerned, it is true that Protocorinthian pyxis lids are generally flat, while those of the Corinthian period often curve upwards (*NC.*, 292), but this feature is by no means constant, and of no value for dating, since Middle and Late Corinthian pyxis lids are often quite flat (cf. *NC.*, pl. 35, 1–2, 4). The Protocorinthian knob is generally in the form of a truncated cone (cf. *VS*, pl. 12, 1–3), but other shapes occur (a flat disc, *VS*, pl. 18, 1). The truncated cone form appears on Early Corinthian concave pyxides, also a variant shape (*NC.*, 292, fig. 129). The 'button' form seems to be confined to convex pyxides (cf. *NC.*, pl. 23, 3). The ring handle, Boston, Fairbanks, pl. 47, 484 (if the lid really belongs) is most unusual.

Payne lists only a few lid fragments: *NC.*, nos. 53, 54 (EPC or earlier); 203, 204 (Transitional); 648, 649 A, 661, 662, 664 (EC), and a number from the Malophoros sanctuary at Selinus (*NC.*, p. 339): *MA* XXXII, pl. 84, 5 and 7; pl. 86, 4. Add the following:

(1) *Corinth VII*, i: pl. 22, 144, 145: LPC linear; pl. 41, 328 (sporadic find): button knob with crescent whirligig around disc and ring; rays; dot-and-band on either side of frieze; lion and sphinx; thick filling of incised rosettes and blobs; neat miniature style, shortly after 600 B.C.? Pl. 44, 376: fragment with flat button knob (wheel pattern); processing birds (naturalistic); incised blobs and crosses; probably LC I.

(2) *Perachora* I: *Incised style.* Pl. 27, 12: fragment; floral between sirens; thick filling; rough EC/MC. Pl. 27, 13: bird and sphinx; unincised blob filling; rough heavy style. Date? Pl. 32, 15: goat; dot rosettes; late Transitional. *Silhouette style.* Pl. 27, 8: lion; crude style; Trans./EC. Pl. 27, 10: button knob; women with wreaths; wreaths in field. Late. Pl. 33, 1: women to r. and l., one with outline chiton; dot rosettes. Late Transitional. Pl. 33, 3: silhouette animals, almost impossible to date; perhaps not later than EC. Pl. 33, 12: silhouette naturalistic birds. EC/MC. *Linear.* Pl. 23, 1 and 3 and pl. 26, 1 (note conical oinochoai as decoration) are certainly PC; pl. 32, 16, with linear and ribbed decoration, may be Corinthian.

Pl. 25, 11, with rough strokes in place of rays, and crude silhouette animals, has orange clay and dull black varnish. It may be a Boeotian imitation as Payne suggests.

(3) *CVA Wien, Universität*, pl. 4, 6. One frieze bounded by bands. Akin to Mykonos Group, if not actually belonging to it.

Note: Dugas, *Délos* XVII, pl. 63, 120, lid of the Mykonos Group: *NC.*, no. 662.

TALL PYXIDES

The shape is a continuation of that appearing in Protocorinthian (cf. *VS*, pl. 11, 2 and 3 and *Perachora* I, pl. 23, 6, which is lateish Protocorinthian from the Agora deposit), with some slight modification. The walls, instead of being straight or slightly convex, generally have a slight concave curve; a few examples, however, have straight sides. The vertical handles, of loop shape, are applied to the walls below the rim, and follow the outward curve of the wall. Some examples have a foot-ring, others have the base flat, or concave. The interior is decorated with broad black glaze bands. In the examples with a foot-ring there are concentric bands on the base. Payne mentions no examples of the shape, but they seem fairly common at Perachora, cf. *Perachora* I, pl. 30, 2 and 4 from the Agora S.E. deposit, which are Transitional. Fragments, probably of similar pots, come from the Argive Heraeum (*AH* II, 138, and pl. 59, 13 a–b), and from the Athenaion at Syracuse (*MA* XXV, 543, figs. 128–9). The characteristic rim, with inset groove, appears also in kotyle-pyxides (*NC.*, 295, nos. 700 ff.). The lids must be similar to those of kotyle-pyxides; they do not have such a pronounced dome-shape as do the lids of tall pyxides of the Protocorinthian period.

PYXIS-KALATHOI

Payne, in *Necrocorinthia*, does not distinguish this shape by name from the ordinary concave-sided pyxis. The name here used has been chosen because the shape is obviously modelled on a basket form, and at the same time resembles the concave-sided pyxis in some details. The main features of the shape are fairly constant: (i) concave walls; (ii) a moulded rim at an angle of forty-five degrees (generally thus, but sometimes more nearly approaching the vertical), sometimes with horizontal grooves; (iii) strap-handles placed in the middle of the sides; (iv) the bottom is generally flat. For examples of the shape, cf. *Perachora* I, pl. 30, 1 (here called by Payne a 'pyxis-kalathos'), *ibid.*, pl. 30, 5–6, and pl. 32, 18 (called 'handled-kalathoi'); all from the Agora closed deposit. There are variant rim forms, and variations from the normal flat base, with mouldings and/or foot-rings, and, in one or two cases, ribbing. Among the fragments from the Limenia sanctuary at Perachora those with the variant forms of the base certainly belong to this shape. Most of the rim forms also certainly belong to pyxis-kalathoi, but a few might come from a large type of kalathos; *cf.* the rims of the kalathoi *Perachora* I, pl. 30, 20, pl. 32, 19 and 22, and the odd shape *ibid.*, pl. 33, 15. A number of small vases are connected with this shape in possessing concave walls and flat handles in the middle of the sides. They are probably the toy form. For the appropriate lid, *cf.* Wilisch, *Altkor. Tonindustrie*, pl. 2, and *Perachora* I, pl. 31, 5. It is flat, resembling an ordinary early concave pyxis lid, with a strap-handle.

Payne lists only two examples of this shape (*NC.*, 292, under no. 666). There are others published in *CVA Fogg Museum*, pl. 4, 9, 11 and 12, which might almost be called concave pyxides. A very considerable number of fragments of this shape were found in the Limenia deposit at Perachora, but only a few of the characteristic lids. Two fragments of the latter were pierced with two holes at the rim, as if for a string attachment.

PYXIDES WITH CONVEX SIDES (WITHOUT HANDLES)

For a discussion of the shape, see *NC.*, 293 (where one EC example is listed; to this should be added *CVA Copenhagen* II, pl. 89, 4 (*NC.*, no. 866)), 305–6 (MC), 322 (LC I), and 331 (LC II). The lids are flat or slightly domed, with a flattened knob. They are difficult to distinguish from the lids of tripod pyxides.

A more or less allied shape is the pyxis in the shape of a dinos, which is of rare occurrence. The example *NC.*, no. 117 is republished in *CVA Louvre* VIII, pl. 21, 27–9. There is another example in *Perachora* I, pl. 26, 21 and p. 95; a third from Perachora, Limenia.

Add to Payne's list the following:

(1) *Perachora* I, pl. 24, 1: shoulder fragment, with lion to r. Later style of the Sphinx Painter.

(2) Honolulu, *Tenth Anniversary* volume (1937) of the Honolulu Academy of Arts, pl. 61. It is said by Amyx, 210, to be of a style antecedent to the MC ‘ Delicate Style ’. Therefore EC and related to the EC covered cups *NC.*, nos. 700–3?

(3) *CVA Bibl. Nat.* I, pl. 15, 12–13: variant shape lacking the usual heavy rim.

(4) *CVA Louvre* VI, pl. 10, 11–14 (CA 3). With flat lid. Neat animal style. Tongues around base as well as shoulder. MC. Payne, *NC.*, 341, compares *NC.*, no. 868 ff.; Amyx, 227, n. 20 thinks the lid may not belong, and seems to call it (the lid) LC I.

(5) *CVA Louvre* VIII, pl. 21, 13 and 18, and pl. 23, 17, 22 and 26: small exx. decorated with crude shielded-warrior friezes. Very inferior style.

(6) *CVA Sèvres* I, pl. 14, 11 and 13 (inv. 8179). With lid (which has a knob of concave pyxis type). Tongues around shoulder and base; one frieze of griffon-birds and swans. Late MC. Amyx, 227, n. 20 compares some LC I cups, and would date it to the LC period, with the pyxis *MA* XXXII, pl. 83, 1, which Payne (*NC.*, 339) calls MC.

(7) Boston, Fairbanks, pl. 47, 483 (inv. 24449): of rather curious flattened shape. The mouth has only a slight rim. Flat lid and knob. Heavy foot. On shoulder, tongues and dot-and-band; one frieze of animals, below which, two narrow bands and a broad band. Neat slender style of MC, with thick filling of dots and some rosettes. Payne (*NC.*, 340) compares *NC.*, nos. 871 ff. A better comparison is *ibid.*, pl. 28, 11 (no. 889); by the same hand?

(8) Coliu, *Musée Kalinderu*, inv. 32, figs. 19–20; of broad relatively shallow shape. One frieze of inferior heavy animals of MC style, regarded by Amyx, 222, as a rough copy of the

style of the Scale-pattern Group. The vase is of some interest for its possible provenience in one of the Euxine colonies.

(9) *Art and Archaeology* 1931, 231. With lid (which has a knob of concave pyxis type, and is slightly domed, with band and dot-and-band decoration). From the North Cemetery at Corinth. One frieze; panthers, sirens, swan, with thick incised rosette filling, blobs and dots. Short rays around base. Neat ' stocky ' style of drawing, and careful incision. At the latest early MC.

(10) *AJA* 1930, 541, fig. 21 (middle row), from a group found beside grave 139 at Corinth (North Cemetery). With lid. Very indistinct animal frieze on body. MC? The same grave group contains two miniature linear examples, one of flattened form.

(11) *Clara Rhodos* VI–VII: Papatislures, gr. 5; inv. 13697, figs. 21 and 28. With lid. On the lid: subgeometric animals with hailstorm filling; on the body: bands and one frieze of late MC animals, as far as can be judged from the drawing, fig. 28. Found with a ' Vroulia ' cup (inv. 13694, figs. 26 and 27), two Fikellura amphorae (inv. 13692 and 13693), and two late continuous-curve Attic b.f. cups with palmette bands (inv. 13695 and 13696). On the grave see above, n. 42.

(12) *CVA Gallatin Coll.*, pl. 2, 10: very neat example of the ' White Style '.

(13) *Hesperia* I (1932), 66 and fig. 11. From Corinth (MP 209). Fine ' White Style ' or imitation ' White Style ' example with lid.

Note : *NC.*, no. 1297 is now published in *CVA Oxford* II, pl. 2, 35 and pl. 3, 15; *NC.*, no. 862 in Langlotz, *Würzburg*, pl. 12, 120; and *NC.*, no. 876 illustrated in Buschor, *Griechische Vasen* (1940), 63, fig. 73.

PYXIDES WITH RING HANDLES

This is a relatively rare shape; see *NC.*, 293 (EC), and 308 (MC); *ibid.*, fig. 147 for the shape and the type of lid. An EC variant form of the ring handles appears in *Perachora* I, pl. 27, 4 and p. 96.

Add to Payne's list the following:

(1) *Perachora* I, pl. 27, 4 and p. 96: fragmentary, with variant form of ring handles, as noted above. Zig-zags on edge of rim, neck and dividing band between the two friezes; rays on upper surface of rim; tongues around neck. Two friezes in a style related to that of the Warrior Group aryballoi. EC. Noteworthy for the incised chevrons on the middle ribs of the handles, unknown elsewhere.

(2) *AJA* 1930, 541, fig. 21 (first in top row): from Corinth (North Cemetery, from a group found beside grave 139). MC style. Amyx, 231, n. 112 compares with it the style of *NC.*, no. 1137, and *ibid.*, 222 the style of *NC.*, nos. 916–18, which are rough copies of the Scale-pattern Group.

(3) *BSR* XIV, pl. 15 A: from Selinus (grave group 55), in Palermo; with late shielded-warriors. Dated too early by Atkinson. See Amyx, 231, nn. 103 and 112.

PYXIDES WITH CONVEX SIDES AND UPRIGHT HANDLES

See *NC.*, 307 (MC); 322–3 (LC I); 331–2 (LC II). The standard shape is *NC.*, 307, fig. 142, *ibid.*, 323, fig. 164, and Langlotz, *Würzburg*, pl. 9, 115. The type of lid generally used fits over the rim of the pyxis, and has a knob of the button type. The handles are circular in section, hence the shape is often called a ' pyxis with cylindrical handles '. Payne lists no Early Corinthian examples.

Add to Payne's list the following:

(1) *CVA Copenhagen* II, pl. 89, 6; inv. 6366. With cover. Tongues on shoulder; one frieze; below which, broad bands. Crude late MC style (slender animals), with thick filling.

(2) Coliu, *Musée Kalinderu*, no. 13; usual subsidiary decoration; one frieze, style of *NC.*, pl. 29, 5. Amyx, 224, suggests that it is near to the painter of Boston, Fairbanks, pl. 47, 482. Of interest only for its possible provenience, *i.e.*, one of the Euxine colonies.

(3) *CVA Musée Rodin* I, pl. 5, 6–7; no. 298. Cover missing. Bad MC animal frieze style; but there is no reason for doubting that it is Corinthian. *Ibid.*, pl. 6, 7–9; no. 504. A variant shape, with ' strap ' handles on the shoulder, set at an angle of forty-five degrees; the body is much of the same shape as other pyxides of this type. Zig-zag on the rim; band around the base. The style of the frieze is very crude. Probably late MC. The lid (of LC II style) does not belong to the body.

(4) *CVA Oxford* II, pl. 5, 2, 4 and 6; inv. 1884.687. Tongues around the neck. One frieze in late MC very slender style. *Ibid.*, pl. 5, 3; inv. 1880.16. Neat ' White Style ' example. LC. Cf. *NC.*, nos. 1325 ff.

(5) *CVA Hague* I, pl. 6, 6; inv. 716. With lid. Tongues on shoulder; one frieze of very crude MC style. *Cf.* Payne's group *NC.*, nos. 869, 1076–9, and many others, as, for example, *Albania* (1932), p. 11, no. 4, fig. 6 (olpe), p. 13, fig. 9 (broad-bottomed oinochoe), and p. 15, fig. 13 (trefoil-mouthed narrow-bottomed oinochoe).

(6) *CVA Madrid*, pl. 6, 1 *a–b*. The lid does not belong. Tongues on shoulder; one frieze. Style close to *NC.*, no. 898.

(7) *CVA Univ. of California* I, pl. 9, 5 *a–d*; inv. 8/4180. Leaf-arch pattern on shoulder. One frieze. Late MC; very close to *NC.*, no. 896 (pl. 28, 8).

(8) Langlotz, *Würzburg*, pl. 9, 123. With lid. Bands on the lid; upper part of the handles covered with black glaze. Tongues in compartments on the shoulder, below which four narrow bands; three broad bands on the lower part of the body. LC? *Ibid.*, pl. 9, 115. The lid is noteworthy. It is much of the shape of a powder pyxis with ' strap ' handle. Narrow bands on the lid; rays on the shoulder, below which very neat check pattern band between narrow bands. Broad and narrow bands on the rest of the body. Neat ' White Style ', or very similar to it.

(9) Boston, Fairbanks, pl. 47, 482; inv. 92.2602 (72). Globular pyxis with lid of the usual type. Tongues between bands on the shoulder; below, dot-and-band; one frieze of animals and narrow and broad bands. Payne, perhaps not very suitably, compares *NC.*, nos. 895 ff. Amyx, 224, groups it with (same hand) the pyxis at San Simeon and, ' almost certainly ' by the same hand, the Amsterdam pyxis *Gids*, pl. 55 B, 1279. Late MC.

(10) Toronto, RHI, pl. 13, 182 (C 224). Complete with lid. Late shape with broad base and heavy base moulding; the lid is flat, with a button knob. On lid, dot-and-band and tongues; single frieze with swans, sirens, panthers and goat; on the knob, tongues and bands. On the body, tongues around the mouth, then dot-and-band between narrow bands; one frieze, below which three narrow bands and fine very narrow rays; edge of foot black. In frieze, animals as on the lid. Filling of blobs and dots, not very thick. Cf. *NC.*, pl. 28, 12. Late MC.

(11) Amyx, 223 ff., and pls. 30 *d–f*, 31 *c*; inv. SSW 9500. A good specimen of the type and its lid, but the handles are set at an angle. Subsidiary decoration: tongues, dot-and-band, and broad and narrow bands. One frieze. It belongs to the group Boston, Fairbanks, pl. 47, 482 and (' almost certainly ') Amsterdam, *Gids*, pl. 55, 1279, which Amyx, 224–5, correctly regards as a group affected by the Dodwell Painter's influence. The Kalinderu pyxis (2 above) is near to this painter.

(12) Amsterdam, *Gids*, pl. 55, 1279; formerly in the Scheurleer Collection at the Hague (but not *CVA Hague* I, pl. 6, 6). Roughly globular shape, with heavy foot; handles curve out and up; lid of the usual type, decorated with bands. Tongues and dot-and-band on the shoulder above the frieze; below the frieze, narrow bands on either side of one broad band. Animal frieze: panthers, bird with facing head. Thick filling of rosettes, blobs and dots. Ascribed by Amyx, 224 ' almost certainly ' to the painter of Boston, Fairbanks, pl. 47, 482 and the San Simeon pyxis.

(13) *AJA* 1930, 541, fig. 21. In a group from the North Cemetery at Corinth, found beside grave 139. Complete with lid. The handles flare out and then bend slightly inwards. Decorated with broad bands and dot-and-band; continuous vertical wavy lines on the shoulder.

(14) *CVA Taranto* II, pl. 1, 1. Example with cover of usual type. From a grave found 20/4/26 (Vaccarella). On the cover: tongues and bands; on the body: tongues, dot-and-band, one frieze, and then broad and narrow bands. The shape is taller than usual, and does not narrow so much to the foot. In field: swans with 'S' necks, and doves (?), in alternate arrangement. Filling of incised rosettes, dots and blobs. MC. *Ibid.*, pl. 1, 3: usual type; no lid. From grave found 7/3/34 in the Via Nettuno. The frieze extends from the junction of neck and body over most of the body, the lower portion of which is decorated with bands. In frieze: swan between griffon-birds; thick filling of incised rosettes and blobs. Late MC. Found with the late MC cups, *ibid.*, pl. 1, 2, and pl. 1, 5.

(15) *NS* 1936, 132–4, figs. 21–3. From the same series of finds as the second example in (14) above. Vaccarella, grave 43. No lid. Base covered black glaze. One frieze in rather crude late MC style.

(16) Unpublished in Taranto: (*a*) Vaccarella, Via Messapia, 11/1/28. MC, near Dodwell Painter. (*b*) From the same burial. By the Dodwell Painter. Found with a Corinthian red-ground neck amphora. (*c*) Via Dante, 2/5/27. Usual type, but with red ground. In frieze: horsemen on alternately black and white horses, galloping to l. Inscriptions in field (details not available). Found with an Attic b.f. amphora of about mid-sixth century date.

(17) *CVA Rodi* II, pl. 8, 5; inv. 13111. With cover. Quite neat imitation 'White Style'.

It should be noted here that a number of pyxides with upright handles and lids of the same type as *NC.*, 307, fig. 142 appear in the Italian excavations on Rhodes and frequently in museum collections, *cf.* the examples with outline birds, Boston, Fairbanks, pl. 30, 295–6, but these are not always Corinthian. They frequently have a narrower foot than is usual in the certain Corinthian examples, and the lower part of the body slopes inwards more sharply. Some, at least, of these are East Greek, probably Rhodian; cf. *Clara Rhodos* VIII, San Giorgio gr. 4. 1 (45, fig. 28) and Marmaro gr. 78 (fig. 179). The decoration resembles Munich, *SH.*, pl. 16, 454 and pl. 17, 460, 466 and 467. There is another similar in Bonn, *AA* LI (1936), 382, fig. 37, from South Russia, which Greifenhagen (*loc. cit.*) suggests is fifth century Rhodian, comparing *Clara Rhodos* III, fig. 209 r. The example *Clara Rhodos* VIII, Marmaro gr. 5, fig. 93, with linear decoration on the lid, tongues on the shoulder, and bands at intervals on the body, looks like a sort of imitation 'White Style', and may be Corinthian. So may be *Clara Rhodos* IV, Makri Langoni gr. 36, fig. 112, where the lid certainly appears to be LC II; so, doubtfully, *Clara Rhodos* VIII, San Giorgio gr. 4. 2 (45, fig. 28). Laurenzi, speaking of the Marmaro gr. 5 example is correct in saying that the shape *begins* (at any rate in Corinthian) about 600 B.C., but the examples in San Giorgio gr. 4 occur with a black glaze pot (cf. *Clara Rhodos* IV, Makri Langoni gr. 36), and in Marmaro gr. 5, too, the East Greek amphora (fig. 93, which may be taken into account though it was found outside the 'cassa') is of the type usually occurring with Attic b.f. (*cf.* Marmaro gr. 78, fig. 179). If the example *Clara Rhodos* VIII, Marmaro gr. 5, fig. 93 is Corinthian it is LC II.

The clay of this pot is described as 'giallo chiaro', while that of one of the pyxides in Marmaro gr. 78, mentioned above as probably Rhodian, is called 'rosso-bruna'. It is difficult to distinguish Corinthian and East Greek examples of this shape from a photograph; the fabric is the only test. The Bonn example (see above, *AA* LI, 382, fig. 37) has reddish-brown clay, yellowish-white slip, and black or orange-brown glaze.

It should be noted that the two examples *Clara Rhodos* VIII, 161, fig. 148 (Marmaro gr. 42. 8 and 9) occasion no doubt at all. The shoulder decoration (to say nothing of the extra ring handles in the one example) clearly suggests the group Munich, *SH.*, pl. 17, 473 and 474.

The Corinthian 'White Style' in this shape continued into the fifth century. Examples are forthcoming from a well at Corinth of the period 550/480 B.C. See *Hesperia* VII (1938), 590, fig. 16, 128. Others, apparently Corinthian, have been found at Argos, with Attic white-ground lekythoi (*ADelt* XV (1933/35), 43 ff., grave 2, fig. 3). The shape varies;

examples with broad and narrow foot occur (*cf.* grave 5, fig. 25, p. 43; and grave 7, fig. 28, p. 46).

Add to Payne's catalogue the following references:

CVA Oxford II, pl. 5, 2, 4, 6: *NC.*, no. 897; *ibid.*, pl. 5, 9: *NC.*, no. 903.

PYXIDES WITH CONVEX SIDES AND HANDLES IN THE FORM OF FEMALE HEADS

This elaborate type of vase, important for the chronology of Corinthian terracottas, is treated by Payne in *NC.*, 293 (where he lists one EC example), 306–7 (MC), 322 (LC I), and 332 (LC II), and by Amyx, 207–15.

Add to Payne's list the following:

(1) *AA* XLV (1930), 22, fig. 6, and 24. In the Hermitage Museum (inv. 5551). With two female plastic heads, the style of which cannot be judged from the photograph. Amyx, 213 calls them very early MC. There are two friezes of animals, divided by dot-and-band. Filling of rosettes with double centres and incised blobs. Neat style, with early proportions; careful drawing and incision, somewhat similar in style to the Perachora Painter (*NC.*, no. 190), but later. Broad foot; tongues around lower part of body. Despite this, EC? Amyx, 227, n. 5, calls it 'early MC, perhaps related to the Chimaera Group, but earlier'.

(2) *AJA* 1930, 541, fig. 21 and 543, fig. 22: a fine example mentioned by Payne, *NC.*, 342 (from *Art and Archaeology*, May/June 1930, 257, fig. 12), and called by him 'transitional from Early to Middle Corinthian'. Amyx, 214 and n. 35, dates it somewhat later, to his 'MC III' period of terracottas (*i.e.*, the end of the MC period) on the style of the heads. This appears somewhat too late.

(3) *AA* LIII (1938), 443–4, figs. 27–8, 454 and 457. In Munich (inv. 7741). With two female plastic heads. From Greece. The character of the clay is not mentioned; the glaze is burned red and badly worn in places. The heads look late and developed. Amyx, 214, tentatively dates them *c.* 575 B.C. Bands on upper surface of rim; crosshatching on side; neck glazed. The shoulder frieze is divided into two sections by the plastic busts: (A) On r., female seated, with a child on her lap; before her stand two women with wreaths; a second female with a distaff and before her a woman in a peplos with a wreath fill the l. half of the frieze. (B) On the r., seated female with a distaff; before her stands a woman in a peplos with a wreath in each hand; on the l., seated female with a child on her lap; two women and a child before her clad in peploi. The main frieze is divided from the one above by rough dot-and-band. It contains a procession of twenty-four peplos-clad females directed to a seated goddess (?) holding a spindle; two of the figures are children. One figure carries a lyre, another the usual tray on her head; nine join hands and hold wreaths, followed by another bearing a tray with two jugs. Of the rest, one holds an animal of some sort in her arms, another plays the double flutes, and others stand face to face and hold hands. In short all the elements of gynaecium and festival scenes appear here. The filling is composed of dots and a few blobs. Below the field are two broad bands overlaid red, and rays in silhouette and outline. This is an ambitious work in the 'hailstorm warrior' style; a similar taste appears in some late vases, with floral bands in late and crude style with hailstorm filling. It is difficult to date. Lullies suggests 580 B.C., but the heads, the only reliable basis for dating, appear later.

(4) *BullMetrMus* 1936, 104–5, figs. 1–2 and Amyx, pl. 32, *c–d.* With three female heads (Accession no. 35. 11. 21). The style of the heads is very similar to that of the pyxis in St. Louis (*NC.*, no. 1304 and *AJA* 1940, 189, figs. 1–4). The body is decorated with a fine lotus-palmette frieze on a red ground, with maeander and polychrome tongue subsidiary decoration. There is on the base a dipinto (Π) which occurs also on two Louvre craters E 621 (*NC.*, no. 1481)

and E 622 (*ibid.*, no. 1480), attributed to the Tydeus Painter. The pyxis is dated by Richter to about 560 B.C. The heads are dated by Amyx, 214, to Jenkins' LC I period, *i.e.*, 575–50 B.C.

(5) *CVA Poland* II, Coll. Czartoryski, pl. 3, 4; inv. 1305. 'White Style' ex., with three female heads. Bands on the lower part; dot-and-band on the shoulder; above these, tongues in outline and outlined; short zig-zags on the edge of the rim. The upper part of the female body below the head is represented in the round, and the arms are added in paint. See Beazley, *Greek Vases in Poland*, 1, n. 2, and Payne, *NC.*, under no. 894 A. Amyx, 215, dates the heads to *c.* 545–25 B.C., and compares *NC.*, no. 1501 (pl. 35, 6).

Note that the fragmentary head, and the complete pyxis with female heads, from the Malophoros sanctuary at Selinus (*MA* XXXII, pl. 84, 6, and pls. 85, 86, 10), are commented on by Payne, *NC.*, 339. The heads of the latter example are dated by Amyx, 214, to *c.* 575 B.C.

Add to Payne's catalogue the following references:

(1) *CVA Louvre* VI, pl. 11, 1–3 (MNB 625): *NC.*, no. 880.
(2) *CVA Oxford* II, pl. 7, 7: *NC.*, no. 884.
(3) *Ibid.*, pl. 5, 8, 10, 12 and pl. 7, 9 (1892.125): *NC.*, no. 888.
(4) Amyx, 207–15, pls. 28, 29 *a–c*, 32 *a–b*; present inv. no. SSW 9985; formerly in the Torr Collection at Yonder Wreyland: *NC.*, no. 889. Amyx gives a general discussion of the shape, the terracotta busts, and the 'Delicate Style' of Corinthian animal frieze vase-painting.
(5) *AJA* 1940, 189, figs. 1–4: *NC.*, no. 1304.
(6) Metropolitan Museum pyxis CP 54 (from the Cesnola Collection, but from Corinth not Cyprus), *AJA* 1942, 217 ff.: *NC.*, no. 1309. M. J. Milne comments on the incised names appearing on this vase. See also *BullMetrMus* 1942, 36 ff., and Amyx, pl. 31 *f*, 32 *e–g*.
(7) *NC.*, no. 1503: published in *Coll. de M. E.* (*Vente Drouot* 2–4 *juin* 1904), pl. 9, 200.
(8) Neugebauer, *Führer*, pl. 12, l.: *NC.*, no. 882.

TRIPOD PYXIDES

For the shape see *NC.*, 293 (where one EC example is listed, 'unusually low in proportion to its breadth'); 308 (MC); 323 (LC I); 332–3 (LC II). The tendency is for the shape to become taller and narrower in the later periods. Tripod pyxides are not uncommon, but with the exception of the good British Museum example (*NC.*, no. 927 B), by the Dodwell Painter (with a domed lid), they are unambitiously decorated and of inferior quality. In graves they are frequently found with MC/LC cups and aryballoi.

Add to Payne's list the following:

(1) *Corinth VII*, i, pl. 37, 291. From the 'EC' well-group 218–311. It is interesting for the polychrome decoration on the outer face of the feet, and the broken cable-band on their edges. The low shape, with no projecting rim, would seem to indicate an early date. On the interior: red-edged bands. Note the curious holes in one leg 'pierced for suspension' (Weinberg).
(2) *Ibid.*, pl. 37, 290. Also from the 'EC' well-group. In the interior: lotus and bud quadruple complex. The lotus appears to be of MC rather than of EC type, according to Payne's dating.
(3) *CVA Hoppin Coll.*, pl. 1, 3 and *CVA Robinson Coll.*, pl. 14, 14 and 15. LC examples of the common type with sirens on the legs. That in the Robinson Coll. has a lid with a button knob.

(4) *CVA Rodi* II, pl. 4, 1–2 (inv. 13036 and 12515): two inferior MC/LC examples. The cover of one appears to have some form of sub-geometric (silhouette) frieze. From Makri Langoni, Kamiros, gr. 78, and Checraci, Kamiros, gr. 7; *Clara Rhodos* IV, 317, fig. 352, and 351, fig. 396.

(5) *CVA Poland* I (Goluchow), pl. 6, 4. Complete with lid. Silhouette animals on lid and feet. LC. Another example with silhouette animals in *Art and Archaeology*, April 1931, 230. Sphinxes on lid and side panels. A good example of the LC II shape (not EC, as it is said to be in *op. cit.*).

(6) *CVA Gallatin Coll.*, pl. 2, 2: example in the 'White Style' (?). Its fabric is thus described: 'clay light orange, with cream-coloured slip'. This does not sound very like Corinthian, but see Payne's comment on the 'white slip', *NC.*, under no. 1225.

There are two related shapes which might be mentioned here:

(1) Bowls with projecting grooved rim, rectangular in section, very like the bowl of a tripod pyxis, but different from Payne's Early Corinthian 'bowls' (*NC.*, 297, fig. 132) and Middle Corinthian 'bowls with offset rim' (*ibid.*, 312).

There are one or two examples from Perachora, covered with black glaze, and four of the same type, with variations, from Corinth, in the black-polychrome style. Cf. *Corinth VII*, i, pl. 37, all from the 'EC' well-group 218–311:

292: shallow bowl, with small splayed foot; heavy projecting rim, rectangular in section, grooved on the outside vertical face. Black and red band decoration.

293: bowl of the same type as 292, but with broader splayed foot; projecting rim, rectangular in section; double incised line on the lip. Black-polychrome decoration.

294: bowl deeper than 293, but with the same foot; rounded lip. Black-polychrome decoration.

Somewhat different, in that it has traces of a ring or reflex handle just below the rim, is *ibid.*, pl. 43, 355, from the MC well-group. It is of much the same shape as the foregoing, but the rim, though flat on the top, does not project. Black-polychrome decoration.

(2) Stemmed pyxides of the type *NC.*, 308, fig. 145, some of which have the same grooved rim, rectangular in section, as some of the bowls, while the following example (not in Payne's catalogue) is decorated on the interior of the bowl with a floral complex (*cf.* the tripod pyxis from Corinth, no. 2 above):

CVA Musée Rodin, pl. 6, 4–5 (inv. 899): shallow bowl, with grooved rim, rectangular in section, and high stem gradually sloping out to the foot. It is decorated with a double palmette chain on the exterior of the bowl, and with black-polychrome on the stem and base; on the interior of the bowl is a fine lotus-palmette floral complex, not far from the style of the Chimaera Painter, but somewhat looser in rendering.

The nature of the 'bowls' *BSA* XXXIX (1938/39), 24–5, nos. 57–61 (from Polis, Ithaka) is obscure. Some (57, 58) have handles, and one at least, to judge from its profile fig. 13, seems to be something like a shallow kotyle.

POWDER PYXIDES

For a discussion of the shape and its origin, and a list of find-places, see *NC.*, 293, no. 672. The wooden examples with grooving, quoted by Payne, *ibid.*, n. 7, are illustrated in *AA* 1940, 625–6, figs. 5–6. Usually the lid only is decorated. Note the variant shape with knobbed lid (*NC.*, no. 672, 5; Furtwängler, *Aegina* II, pl. 128, 23), which is rare. Payne cites two Late Protocorinthian examples (in *NC.*, under no. 56: Syracuse, gr. 412 (*NS* 1895, 164) and Villa Giulia from Caere (*Studi Etruschi* I, pl. 27)). The Syracuse example was found with a linear conical oinochoe, and is decorated with a band of stalked rosettes and groups of vertical zig-zags between dot-and-band, very similar to the earliest linear example from Perachora. At Phaleron (gr. 71, *ADelt* II (1916), 34, fig. 26, recently republished in *AJA* 1942, 23 ff.) was found an example of the type very common at Perachora, with the vertical wall decorated with a single band of upright wavy lines. The Phaleron example (gr. 71. 2 c) was found with linear pyxides with a faintly concave side in one case (gr. 71. 2 b = LPC?) and with definitely concave side in the other (gr. 71. 2 a = Transitional or EC), both linear. Thus this type of powder pyxis (with vertical wavy lines in continuous bands) might well be early, though the examples from Perachora and the dishes with similar decoration give at first the opposite impression.

Other examples (dateable ?) mentioned by Payne are: from Rhitsona (*JHS* 1910, 355, fig. 20, no. 36; early sixth century tomb); three examples from Gela: (i) from gr. 64 (Payne dates the grave to mid-sixth century), with two silhouette friezes; (ii) Salerno, gr. 16 (*MA* XVII, 374, fig. 278), of shallow type, perhaps Middle Corinthian; (iii) gr. 28 (*MA* XVII, 40), which may be a late burial; two from Syracuse, gr. 192 (*NS* 1895, 130, and fig. 93), dated by Payne, to early sixth century; and gr. 471 (*NS* 1895, 180, fig. 80), a grooved powder pyxis, in a grave group of EC (?) date (with pointed aryballos). They appear on other sites also: *AJA* 1929, 541 (Corinth); *Clara Rhodos* III, 46 (Ialysos), with an imitation of a Protocorinthian pointed aryballos and a bird bowl. The example *Clara Rhodos* III, 236, fig. 234, and 240, fig. 237 (Ialysos, gr. 224) found with Attic white ground and black-glaze pottery, is not Corinthian. There are some fragments from the Argive Heraeum (*AH* II, pl. 59): 14–15 are of the shallow type; 16, of the later type with more complex decoration; 13 *a–b* may be fragments of a tall pyxis; fragments with ‘water-birds’ are also mentioned. They also occur in Thera (Dragendorff, *Thera* II, 23, fig. 50). They are fairly common in museums: Baur, *Stoddard Collection*, 57, fig. 14, 94–6; *Castellani Collection*, pl. 29, 12 and 14 (slightly out-sloping sides; Mingazzini, text 148–9, no. 383, would date it late); *CVA Copenhagen* II, pl. 84; *CVA Bibl. Nat.* I, pl. 8, 3–4 (shallow type), 2 (deep type; this is Payne *NC.*, no. 1511, LC II); *CVA Poland* II, Cracow, Coll. de l'Univ., pl. 5, 6; Munich, *SH.* 335; Boston, *VS*, pl. 42, 4 and 164 (n. 2) and Fairbanks, pl. 43, 429; pl. 44, 441–2; *CVA Oxford* II, pl. 2, 36 and pl. 3, 16. The last example is dated by Payne to the late seventh century, on account of its resemblance to the early kotylai *NC.*, nos. 193–5 (see p. 192 above). The example found at Syracuse, *AdI*, 1877, pl. CD, 9, is important for its silhouette frieze.

In view of the occurrence of what would otherwise seem to be a late type in grave 71 at Phaleron in an Early Corinthian or even earlier context, it seems that Payne's doubts of the possibility of dating a good many powder pyxides are fully justified, and could no doubt be extended to other shapes with linear decoration.

Note: Here, on account of its shape, may be mentioned the pot Neugebauer, *Antiken*, pl. 61, 146, which is called a ‘korinthische geometrische Büchse’. Found near Corinth. Diam. 0·13 m. Light yellow clay. Shape of an inverted powder-pyxis cover, with three groups of two loop handles on the rim. Decoration (in black glaze and purple paint), narrow horizontal bands and groups of vertical zig-zags, akin to many powder-pyxides. Bands on interior. Neugebauer calls it LPC or EC. Probably EC or later.

The lid, *ibid.*, pl. 62, 149 (diam. 0·125 m.) is of suitable size to fit the above. Clay and glaze are much the same. Found near Corinth. Domed shape, with band handle; decorated with continuous maeander between bands around the handle, and a frieze of alternate swans and owls; dotted crosses between. If really Corinthian, it seems most likely to be LC II. But for the clay and its find-place it might be Boeotian.

KOTYLAI

A good account of the shape is given by Payne in *NC.*, 279–80 (Transitional linear and black types), 294 (EC), 308–9 (MC, earlier and later shapes), 323–4 (LC I), and 334–5 (LC II, with a note on the miniature vases). Also in *CVA Oxford* II Payne's remarks should be noted on pl. 1, 32, 39, 52, 53, 54 and 56. *Ibid.*, pl. 4, 1, all black (except reserved area above base with thin rays), red bands, is important since the style of decoration is later than the shape appears to be. Weinberg also deals with the development of the kotyle shape in *Corinth VII*, i, 86–7 on the basis of material available from the Corinthian well-groups (see below, under no. 18).

Payne's observations contain more or less all that is to be said with assurance on the subject of the shape. The development can be described, in general terms only, as proceeding from (1) the tall form with narrow foot and side often considerably curved, to (2) the squat form with broad foot and straight or nearly straight sides. Some larger kotylai with heavy foot have, however, well curved sides and a mouth broad in proportion to the foot, even though the style of decoration is late. With type (2) goes the sharp-edged heavy foot-ring, as opposed to the neater and lighter rounded foot-ring of the earlier shape. Any attempt to work out more subtle combinations of shape and decoration would be profitless, since it is impossible to decide whether shape or style of decoration is to be taken as an indication of date. An examination of the kotylai published by Weinberg in *Corinth VII*, i (see no. 18 below) seems to indicate that except in the most general terms shape is little index of date, certainly no means of close dating. Furthermore 'it is often difficult to decide whether a kotyle is bad Early Corinthian or just average Late Corinthian' (J. K. Brock, in *Perachora* II). The same uncertainty, in particular on the commencing date of the later shape, is produced by the graves of the Phaleron cemetery (published by S. Pelekides in *ADelt* II (1916), 13 ff., and republished by R. S. Young in *AJA* XLVI (1942), 23 ff.), where the only vases which recall the Late Corinthian types (as either *NC.*, fig. 150 or fig. 182) occur in graves 33 (2 a and 2 b, cf. *NC.*, fig. 150) and 17 (1, cf. *NC.*, fig. 182). These are Attic imitations (therefore later than their Corinthian prototypes) appearing in the group of graves 17, 33 and 59 dated by Young to the end of the seventh century or the beginning of the sixth, and therefore much earlier than the kotylai of the Samos Group of Corinthian and the Comast Group of Attic, which might otherwise seem a useful guide to the date of the type. More detailed observations are made below on the kotylai from the Corinthian well-groups. The great mass of kotylai fragments from the sanctuary of Hera Limenia at Perachora gives no further information on this subject, except to confirm the impression that shape is no reliable criterion of date.

Add to Payne's list the following:

(1) *Monuments Piot*, XL, 23–52, pls. III–IV, and figs. 1–17: fragmentary; recently acquired by the Louvre (inv. CA 3004) and published by P. Amandry. It is, with the exception of fragments to be published in *Perachora* II, the finest of the kotylai to be added to Payne's catalogue in *Necrocorinthia*. The shape is broad at the foot, in comparison with the rim diameter, and taller than some Samos Group kotylai; the angular foot-ring is only of medium size. Subsidiary decoration: disc at centre of underside of base, rings at outer edge of underside; band on outside of foot-ring; above, outlined tongues, three narrow bands, lotus-palmette chain, three narrow bands, frieze and one narrow band on the rim. In frieze (A) two-horse chariot to l., Athena to r. with oinochoe, Herakles to r., the Hydra, and Iolaos striding l.; (B) krater on stand, and six padded dancers. Scene (A) occupies about three-fifths of the frieze. Filling of inscriptions, giving the names of the participants in (A) and of the padded dancers in (B). Excellent style in drawing and incision of detail. Amandry dates it to the middle of the first quarter of the sixth century, comparing the group of Gorgoneion cups, which may be slightly later. Cf. *ibid.*, 32–43 for a discussion of the renderings in Corinthian of this adventure of Herakles. Amandry adds two examples (this kotyle and the plaque fragment *AJA* XXXV, 22, fig. 22) to Payne's list; further examples are the krater fragment in Bonn (*AA* 1936, fig. 16) and a fragmentary cup from Perachora. For the padded dancers, *cf.* the Samos Group kotyle, *NC.*, pl. 33, 9. The significance of the padded dancers is discussed at length by Amandry, *ibid.*, 43–52, with a useful conspectus of the previous literature (43, n. 1).

(2) *CVA Brussels* I, pl. 1, 18; inv. A 53. Intermediate shape, with neither broad nor narrow proportions; the base appears to have been restored; large handles. Broad neatly drawn checker band on the rim; one frieze with confronted swans, and palmettes under the handles; incised rosette filling; tongues around the base. Either EC or MC.

(3) *CVA Cab. Méd.* I, pl. 15, 15 and 18 (inv. H 1103) and 20–1 (inv. 4745). Two small exx. of ‘ late ’ shape. Close-set vertical wavy lines around the rim, thin rays, late inferior style animal frieze.

(4) *CVA Louvre* VI, pl. 6, 16–17, inv. MNB 427, from Athens. Small ex. of ‘ lateish ’ shape, with groups of vertical wavy lines on the rim, small rays, and one frieze of crude, very scrappy, silhouette animals. Pl. 6, 22–4, inv. 3103, from Corinth. Of ‘ lateish ’ shape, with broad base and heavy foot, its proportions being very different from *NC.*, no. 673 on the same plate (18–21). Vertical wavy lines between the handles, and ‘ double-axe ’ at the handles; dot-and-band, one frieze, dot-and-band and double rays (smaller and closer than in *NC.*, no. 673). In the frieze, lions, stag, sphinx, etc.; rough style, with thick filling. Pl. 7, 1–3, inv. N 3091, from Corinth. Of medium type, but low. Vertical wavy lines on the rim, small rays; one frieze of heavy roughly drawn animals, with short legs; scrappy filling. See *NC.*, 341 for the other kotylai in this fascicule. Payne describes the linear type, pl. 6, 13, as rare in the late seventh century.

(5) *CVA Louvre* VIII, pl. 27, 1 and 5. Late running dog. 6 and 11: another example of later shape and cruder style. Pl. 27, 14: crude animal frieze ex., of another ‘ late ’ shape (?), *i.e.*, with narrowish foot but straight sides. MC. Pl. 22, 17 and 19: black-polychrome, ex. of ‘ late ’ shape (rays on reserved ground) with very broad base.

(6) *CVA Madrid* I, pl. 4, 3: ex. of ‘ late ’ shape with very small rays. No rim pattern. One frieze of animals in slender style, but with thick filling of two-way incised blobs.

(7) *CVA Hague* I, pl. 1, 8–11: four conveniently grouped specimens of kotyle shapes: 8 is *NC.*, fig. 120, no. 200; 10, with bands and a frieze of running dogs, is also ' early '; 9 appears lateish, with broad mouth and narrow foot with heavy angular foot-ring; continuous vertical zig-zags on the rim, the rest black, except for a reserved band with silhouette birds. 11: with broad base and heavy foot, as *NC.*, fig. 150, is ' late '.

(8) *CVA Providence*, pl. 6, 1 *a–b*; Acc. no. 17.100 (C 2347). Ex. with heavy angular foot. Neat well-spaced verticals around the rim; short rays (notably short) around the base. One frieze with sirens, swan and panther. MC relatively slender style.

(9) *CVA Taranto* II, pl. 2, 7–8: two exx. of taller ' earlier ' type (*i.e.*, taller in proportion to the mouth diameter) with rounded foot-ring. The zig-zags on the rim are neater than usual; above the frieze, narrow dot-and-band and broad bands; below, band and neat rays. Dot-and-band decoration appears on earlier linear kotylai also, but not on the ' later ' shapes. The silhouette friezes with blob filling would at first sight be regarded as later than might be expected from the shape, but in 8 at any rate close inspection reveals the early style of the lions. In the friezes appear, in 7, animals and human figures with knives (?), in 8, lions and boars.

(10) *CVA Genova-Pegli* I, pl. 1, 1–4; inv. 1172. Ex. of ' later ' shape, with the mouth rather broad in relation to foot and height, but not of the ' latest ' shape with broad foot, nearly straight side and heavy angular foot-ring. Decoration: pair of narrow bands, neat vertical wavy lines, pair of bands, single frieze, pair of bands, short neat rays. In the frieze: panthers and a goat; an unusually grotesque example of the ' dachshund ' style. Filling of incised rosettes and blobs. Mediocre style; perhaps MC rather than LC. But a group of kotylai from Monasteri in the Perachora (*JHS* 1936, 144) should throw some light on the dating of this style.

(11) *CVA Braunschweig*, pls. 3–4: ' Skyphos ' [publication not seen]: ' early and spirited; certainly by the Dodwell Painter ' (Amyx, 232, n. 126).

(12) Dugas, *Délos* X, pl. 8, 491–2: fragments of Transitional kotyle with lion and goat; dot-and-circle, blob and diamond filling.

(13) Dugas, *Délos* XVII, pl. 57, 73, 74, 75: ' later ' black type, with fine widely spaced rays. 77: with MC floral band. 78: of rather squat broad shape, but with ' earlier ' foot and neat rays and linear decoration, including groups of upright zig-zags on the rim. In the frieze: eagle between sirens. EC? Pl. 58, 79: very fragmentary, with one frieze in what appears to be late EC style (?), but of ' early ' shape. 83: ex. of ' late ' shape, with ' stick-legged ' elongated goats. A variety of late miniature kotylai.

(14) Boston, Fairbanks, pl. 45: 476 (inv. 21.1376): ex. of ' earlyish ' shape, *i.e.*, with a foot narrow in relation to the mouth, and relatively tall. Neat vertical wavy lines on the rim; one frieze, two narrow bands, neatly spaced well-drawn rays. In the frieze (as far as can be made out), animals of heavy-bodied type with short legs in what *might* be called a rough late style. Filling of incised rosettes and dots. It appears quite uncertain whether the style is late, so that the shape is no guide to date, or whether it is early in keeping with the shape.

Pl. 46 affords a useful comparison of the Samos Group kotyle type (475 (inv. 95.14) which is *NC.*, no. 951) and the common black-polychrome type with similar rays (478 (inv. 14.5)).

(15) Coliu, *Musée Kalinderu*: two exx., no. 6, p. 28, fig. 6, and no. 7, p. 29, figs. 7–8. No. 6 has linear decoration of vertical zig-zags, dot-and-band, vertical zig-zags, dot rosettes and double rays; shape as Payne *NC.*, fig. 120 A, *i.e.*, the very narrow-based type; cf. *NC.*, pl. 22, 6 for similar linear ornament. No. 7 has on the rim vertical zig-zags; at the handles, ' double-axe ' between verticals; below, bands; one frieze of silhouette lions, goats and swan, with small neat dot rosettes; dot-and-band and rays. The shape is not of the extremely narrow-based type of no. 6, but more like *Corinth VII*, i, pl. 34, 252 (from the ' EC ' well-group). Neither the dot-rosette filling nor the animals are really early; no. 7 is almost certainly MC, and so, probably, is no. 6. This date fits in with the rest of the Corinthian vases in the Kalinderu Collection, none of which (not even the linear alabastron no. 11) need be dated before 600 B.C. It may well be, as suggested by Coliu (16–17), that these vases are a group found on the site of one of the Euxine colonies.

(16) *NS* 1936, 119, fig. 9. Of lateish shape. Upright wavy lines on the rim; one frieze with goat and panther; short rays; thick filling. The style is of a rather rough ‘ dachshund ’ type. It is one of three kotylai in burial no. 14, Via Ramellini, Taranto. MC (?).

Ibid., 132–3, fig. 21 (also part of figs. 22–3). Nine exx., all of the same shape, some poorly preserved, from a grave, no. 43, in Via Nettuno, Taranto. The editor suggests a local manufacture for some of them. The best examples, as far as can be made out from fig. 21, belong to the heavy ‘ dachshund ’ style, with incised rosette and incised blob filling. Late MC to LC I, to judge from the accompanying cups. For the latter, see below, ‘ Cups ’, A, I, 6.

(17) *AJA* 1931, 12, fig. 7; 13, fig. 8; and 14, fig. 9. From Corinth. All, with slight variations, are of the broad later type. Subsidiary decoration: narrow band on the rim, vertical wavy lines, two narrow bands above and below the frieze, broad short rays. Each has one frieze of animals of inferior heavy elongated type, with filling of incised rosettes and blobs. MC.

(18) *Corinth VII*, i, pl. 28, 191: fragment of large ex., with bird and panther, and filling of incised rosettes. Subsidiary decoration: vertical wavy lines and three narrow bands above the frieze; below, three narrow bands and tall rays. Sporadic find. EC. Pl. 34, 250: large fragmentary ex., with two narrow bands on the rim, broad frieze, two broad bands overlaid narrow red, neat rays. Swan (?) between lions, boar, panther, swan; incised rosettes. It forms one of a group of varying period (250–7) with only one narrow band or two at the rim, instead of a broad decorated handle zone. Good style, with careful drawing and incision. EC.

From the same ‘ EC ’ well-group (its general date is given by Weinberg as *c.* 600 B.C.) comes a whole series of medium or small kotylai with frieze decoration, either with one or two narrow bands at the lip (251–7), or with handle zones with vertical wavy lines (258–9). This series overlaps in style the group 337–8 from the MC well. Note that there are examples with tongues around the base, as well as examples with rays, in the earlier group (258–9). Tongues are generally later. None of these specimens is of any great virtue, but the following deserve mention. Pl. 34, 251: medium-sized ex., with two narrow bands on the rim, one broad frieze, two wider bands, and rays of medium length. In the frieze: lion, boar, swan, lion; thick filling of incised rosettes. The style is of about the same period of Early Corinthian as in 250, but the shape, with foot broader in proportion to the mouth, seems later. On the other hand 253, 254, 257 (with rough ‘ blobby ’ style), 256 (with elongated silhouette animals), and 259 (of very careless style with crudely incised elongated animals and blob filling) all seem later in style but earlier in shape, with narrow foot and neat foot-ring. This group of kotylai makes it particularly clear how little the shape is a guide to dating. Note that in the same well-group occurs the example pl. 35, 260: with zig-zags in the handle zone, rough dot-and-band above and below the frieze, and small thin rays; in the frieze, shielded warriors roughly drawn, with thick filling. The base of this kotyle is very broad with a heavy foot-ring. *Cf.* Weinberg’s remarks, *ibid.*: ‘ The vase is certainly the latest piece in this deposit and it might be dated later than *c.* 600 B.C. However, since the rest of the dateable vases all belong to the period before 600 B.C. it seems unlikely that the whole deposit should be dated as late. It is more probable that the typical MC shape was beginning to develop at the end of the previous period ’. The kotylai, nos. 251 and 275–6, which approach the shape of 260, lend strength to this supposition, though otherwise it appears that Weinberg dates the end of the well-group too early.

Pl. 42, 337–41: exx. from the MC well-group. 337–8 have crude late Middle Corinthian animals in a single frieze; the subsidiary decoration (wavy lines on the rim) is fairly neat. The shape lies between the EC and MC types. *Cf.* Weinberg, *ibid.*, 78: ‘ The shape is a little lower and wider and has a slightly heavier foot than the typical EC kotyle (*NC.*, pl. 22, 2), but it is not as wide or as broad-footed as the usual MC kotyle, such as no. 342 ’.

Pl. 44, 367: curious medium-sized ex. The shape is broader at the rim than ‘ earlier ’ examples, but as Weinberg says ‘ the shape is nearer to that of the Early Corinthian kotylai than that of the MC kotylai, but the wide-splayed foot is late ’. White style; in the handle zone, triglyph and metope group at either side of handle, octofoil rosette in centre, three vertical lines at the sides; dot-and-band, two narrow bands and rays. On the underside of the base is an inner ring decorated with a checker band; the circle within this ring is reserved, and has a wide band around the edge; in the circle is a siren with spread wings facing r., with a few incised rosettes and blobs. The siren's body is covered with unusual incised scales. Slender type LC drawing.

Pl. 35, 261–4; pl. 36, 265–75: a series of black-polychrome exx., all with rays on a reserved ground. The shapes vary somewhat, with small or broader foot; the foot-ring is of the 'earlier' type. The whole series comes from the 'EC' well-group (218–311). 275 has a broader base, and with the still broader 277 (still with rounded foot-ring) leads on to the later type 342–54 (broader and shallower, with heavier sharp-edged foot-ring) from the MC well-group (331–60).

Pl. 33, 245–6: fragmentary ex. with wide mouth, and body narrowing to a small foot with neat foot-ring. Two narrow bands at the rim, verticals at the handles, and a row of short strokes between them at handle level, narrow horizontal bands, broad bands and rays. A curious survival, as Weinberg points out, of the earlier linear type. From the 'EC' well-group.

(19) *Hesperia* I (1932), 70: ex. of 'early' shape, with narrow foot and wide mouth; rounded foot-ring; double rays. But the style is probably not earlier than 600 B.C.

(20) *Hesperia* IX (1940), 163, fig. 13, no. 31: frs. which Amyx, 232, n. 126, suggests may be by the Dodwell Painter, from the Acropolis. Double-palmette chain on rim; below, panther and sphinx. An example of his later work?

(21) *Perachora* I: *Incised style*: pl. 27, 5: frs. of a kotyle with at least two friezes; neat style EC, by one of the Warrior Group artists (see Amyx, 231, n. 110). 6: fr. with panther; early MC? 9: fr. of large kotyle or small krater with parts of horses (arrangement obscure), and portion of an inscription; late MC or LC I. *Silhouette style*: pl. 23, 7: LPC running dogs. 8: bird on rim, animal frieze below. 9: shallow, wide-mouthed type, with two friezes of running dogs. As Payne observes, 8 and 9 may be MPC. Pl. 26, 8: fr. with man on horseback, followed by a dog. Payne suggests a date *c.* 700 B.C. Pl. 32, 2: linear fr., with silhouette birds on the rim; EC. Pl. 33, 2: linear and crude running dogs; uncertain date. 7: shallow type, with zig-zags, 'stilt-legged' animals and dots; EC/MC? *Linear style*: pl. 26, 6: PC. Pl. 28, 2: neat LPC or EC. 4–5: late MC or LC I from the Limenia sanctuary. 10: small kotyle with dot-and-band; LPC or EC. Pl. 28, 16, pl. 29, 5 and pl. 30, 14: late miniature types, variously decorated. Pl. 33, 6: black-polychrome; hourglass pattern in white on black ground of rim, red band below, rays; EC? Pl. 32, 17: fine fragmentary ex., in black-polychrome style; on black handle-band, white bird; below: red and white lines, white dot-rosettes, incised double verticals with red and yellow (?) enhancement; white dot-rosettes between white lines. Transitional/EC.

(22) *BSA* XXXIX (1938/39), 24. From the cave at Polis, Ithaka. Linear and figured. Two fragmentary with animal frieze. Dated by Miss Benton to 600–575 B.C. The rest linear; one as *NC.*, fig. 180 (LC II).

(23) To the above may be added a number of other exx. from Italian and Sicilian sites, mainly unpublished: (1) in Florence (Mus. Etr. Top.), from among the contents of five tombs at Vulci (*NS* 1896, 286 ff.), a fine EC kotyle (B 15), one other EC example, and two MC; (2) Orvieto, Museo Faina 139: EC/MC ex. with animal frieze; (3) Taranto: Via Iapygia, 14/4/26: ex. in rather neat early MC style; Vaccarella, 22/4/24: two MC exx., one in the incised technique, the other with silhouette animal frieze; Via Crispi, 5/10/22: a very large ex. with step pattern on the rim; in the frieze, padded dancers, contortionists and women in a 'Reigentanz' with wreaths; thick filling of incised rosettes; Vaccarella, gr. 26, 11/8/26: ex. with lotus and palmette between sphinxes in imitation of the Samos Group; Via Duca degli Abruzzi, gr. 1, 16/11/22: large MC ex. with padded dancers and thick elaborately incised filling; found with an Attic Comast cup. Crude MC kotylai, some with silhouette frieze, are common at Taranto: Via Lecce, 10/4/30; Vaccarella, gr. 4, 4/8/22; *ibid.*, gr. 26, 11/8/26; Via Nettuno, 7/3/34; Via Dante, 10/2/26; Vaccarella, gr. 182; Corti Vecchie, 28/1/14; Via Leonida, 8/4/24. (4) Palermo, from Selinus, Galera Cemetery, gr. 42: two Transitional (?) exx. with silhouette animals, and (on the rim) 'subgeometric' birds between vertical wavy lines; the earliest vases from the cemetery, but see above, p. 179 and n. 79, and the remarks, p. 220, on the Musée Kalinderu kotylai. In Palermo, from the Malophoros

sanctuary of Selinus, there are considerable quantities of Samos Group kotylai or inferior imitations, and from the cemeteries of Selinus there are numbers of late kotylai, in silhouette, linear and animal frieze styles, mostly of very inferior quality. In Syracuse there is an abundance of late miniature linear types from Megara Hyblaea. Kotylai also appear in some abundance at Tarquinia, among the larger and better Corinthian vases, generally with animal frieze decoration.

It should be observed that though good quality kotylai are not very common in the Corinthian period, especially examples with figure decoration, those with inferior animal frieze decoration, and poor linear kotylai (especially black-polychrome), are legion. The *Corpus Vasorum Antiquorum* and museum catalogues give a false idea of the numbers of this type of pot. A better idea of relative numbers is given by *Corinth VII*, i, where a considerable number of kotylai appear in a relatively limited total, and by the excavation at the sanctuary of Hera Limenia at Perachora, where immense numbers of kotylai have been found. They are very common, too, in the graves at Corinth.

Add to Payne's catalogue the following references:

CVA Louvre VI, pl. 6, 18–21: *NC.*, no. 673; pl. 12, 7–12: *NC.*, no. 941.

Note that *CVA Copenhagen* II, pl. 91, 7, a kotyle with a curious flat rim at the foot, is not Corinthian, but probably Attic.

KOTYLE-PYXIDES

On this shape see Payne, *NC.*, 295–6 (EC), and 310 (MC), where pots of this type are called ' kotylai with inset rims '. For Attic seventh century ' lidded skyphoi ', see below, p. 230.

There are late Geometric and Protocorinthian linear examples of a type of pot with something of the same rim, but with more of a ' shoulder '; cf. *Corinth VII*, i, nos. 120 and 153, and *BSA* XLIII, 27–28. Such a shape, with elaborate decoration and of considerable size, seems to have been an Attic tradition, *cf.* the B.M. Burgon lebes and other more recently found examples complete with domed lid. From this shape, however, should be distinguished the B.M. krater with the ' Abduction of Helen ', which, in view of its very unequal rim, cannot have had a lid even of the type with an inner flange. Attic examples may have influenced the Corinthian, since there is not a clear tradition from late Corinthian Geometric to Early Corinthian b.f., except for certain heavy and coarse vases, rarely well decorated, from Perachora. It seems doubtful whether the Attic form is derived from the Protocorinthian ' skyphos ' as Buschor seems to suggest in *Griechische Vasen*^{2} (1940), 40.

Difficulty arises on the question of a descriptive term for these pots. ' Covered Cup ' is not a suitable name for any of the examples of the shape; nor is ' Pyxis ' for the larger examples. The very large Attic pots of this type must have been used as mixing-bowls (replacing in Protoattic the krater form of the Geometric period). This may have been the purpose of the larger Corinthian examples, but, since the smaller examples are in the majority and these can have been used only as boxes, ' pyxis ' is not too inappropriate. Shape and decoration also suggest the kotyle. Consequently the term ' kotyle-pyxis ' has been adopted. The ' lekane ', on which see below p. 229, is shallower and of a different origin.

It was not a very common shape in Corinthian, and most examples belong to the Transitional or Early Corinthian periods, as is the case at Perachora. The shape may have been a fashion which died out about 600 B.C., as Payne suggests (*NC.*, 296), being replaced by lekanai (*Corinth VII*, i, 39, no. 120). Small examples with ' running dog ' or linear decoration are difficult to date; e.g., *Perachora* I, pl. 23, 5 and pl. 33, 13. Pl. 23, 5 may belong to the first half of the seventh century as Payne suggests, or be much later.

Add to Payne's list the following:

(1) *CVA Musée Rodin* I, pl. 5, 1–5. Boread and animal frieze on the lid; animal frieze on the cup. Usual subsidiary decoration. Curious style; note the double line in the shoulder complex of the lions and panthers, and the tails passing inside the flanks of the lions, similar to *NC.*, fig. 140 *bis* and (better) *NC.*, no. 1114 (*CVA Cambridge* I, pl. 5, 17). Neat drawing and incision; fairly thick filling. Early MC, related to the early stage of the Dodwell Painter, *i.e.*, an early stage of *NC.*, no. 862; the panthers are a slightly earlier stage of *NC.*, no. 1091 (pl. 30, 6) by the Dodwell Painter.

(2) *AJA* 1930, 541, fig. 21 (fifth in the top row). With cover. From gr. 139 at Corinth. Shape as *NC.*, pl. 22, 5. Linear decoration; dot-and-band, with vertical wavy lines on the rim. The context is predominantly MC/LC.

(3) *AJA* 1931, 15, fig. 11. From the Corinthian Kerameikos. Vertical wavy lines on the rim, dot-and-band, one frieze, step-pattern between bands, rays with curled strokes between. In the portion of the frieze illustrated is a lotus-palmette floral with streamers between sphinxes. Very thick filling of incised rosettes, blobs and dots. Date about 600 B.C.

(4) *Corinth VII*, i, pl. 27, 189: fragment of a kotyle-pyxis, a sporadic find in the main excavation at Corinth. Decoration: early style animal frieze, with thick filling of incised rosettes and blobs; dot rosettes and vertical zig-zags in the subsidiary zone. EC.

(5) *Ibid.*, pl. 27, 190: fragment of a cover of the usual type, a sporadic find on the site of the Museum at Corinth. One frieze of animals of very neat style in drawing and incision of detail. Filling of incised rosettes, some with double centres. Subsidiary decoration: dot rosettes and groups of three vertical zig-zags, dot-and-band and rays. As Weinberg suggests, it may belong to the same workshop as *NC.*, pl. 22, 5 and nos. 700–3 (*cf.* the dot rosettes and zig-zags, and the rendering of the legs of the animals).

Add to Payne's catalogue the following references:

CVA Louvre VI, pl. 11, 4–8: *NC.*, no. 701.
CVA Louvre VI, pl. 11, 9–11: *NC.*, no. 702.
Feytmans, pls. I–III (with discussion): *NC.*, no. 703 (see above n. 8).

LIDS. The usual type of lid will be clear from the complete examples listed above. This form of lid is shared with tall pyxides, and it is often difficult to distinguish the lids appropriate to the two types of pot. Among the fair number of domed lids (with no interior flange) and fragments found at Perachora the very large and fairly large examples seem to belong to kotyle-pyxides. Many of the smaller specimens would fit smaller linear kotyle-pyxides (which appear to be relatively rare), others must be allotted to tall pyxides. Such lids are easily distinguishable from those belonging to pyxides with upright handles, which have a vertical rim.

A few fragments are published in *Perachora* I: of these pl. 25, 7 and pl. 28, 1 seem to be Protocorinthian, belonging to tall pyxides. The use of pl. 33, 4 (Protocorinthian, with rays and running dogs) and pl. 33, 8 (Protocorinthian, with double rays, narrow bands and dot-and-band) is uncertain.

CUPS

A. With offset rim and conical foot.

Payne, in *NC.*, 310, connects the Corinthian cup with offset rim with the Protocorinthian linear type of somewhat the same shape. Weinberg (*Corinth VII*, i, 86) very reasonably derives this Protocorinthian form of the early seventh century from the late Geometric skyphos. With the invention of the kotyle in the later eighth century the skyphos was almost entirely displaced, according to Weinberg, but the rather shallow skyphos type of this period gave rise to the cup with offset rim, the origin of the linear form *NC.*, 23, fig. 9B. It is by no means easy to establish a series to illustrate clearly the development. A number of variant shapes of diverse dates are published by Weinberg. Here pl. 17, 121, pl. 18, 138, pl. 22, 152, and pl. 24, 175 can readily be fitted into the process of development which seems to produce the cup with offset rim, though not one of them shows the beginnings of the low conical foot of *NC.*, 23, fig. 9B. The examples quoted appear to derive from the late Geometric skyphos *ibid.*, pl. 12, 75, but this shape seems also to be the origin of the later skyphoi with offset rim, which appear to develop into a type of deep cup, an intermediate stage between the cup with offset rim and the kotyle. Starting from *Corinth VII*, i, pl. 12, 75, there is a series *ibid.*, pl. 17, 122, pl. 22, 158 (pl. 22, 152 might also be put in this series), pl. 22, 157, pl. 29, 212, 213, which are deeper, with a rim tending to the vertical. Weinberg associates together 175, 212 and 213, but there is a good deal of difference in the depth of the bowl between 175 on the one hand, and 212 and 213 on the other. With 212 and 213 seem to be connected pl. 36, 278, 281, 283 and perhaps 279 (though the date of this example is obscure); pl. 36, 282 stands between the two groups. Some of the examples of this skyphos type with offset rim, such as 152 and 157, are perhaps to be called Protocorinthian (*cf.* the numerous examples given by Weinberg, p. 46, no. 157, of about 700 B.C. and later), but they extend into the Early Corinthian period and possibly later, occurring in the 'Early Corinthian' well-group at Corinth (278, 281, 283). It should be noted here that pl. 36, 286 and 287, of the same well-group, which are of similar shape, though the foot is broader, may be imports (from East Greece ?).

It appears to be this deep type of skyphos with offset rim which Payne has in mind when he compares (*NC.*, 296) the fragments at Delphi and Aegina, which 'may well be early', with the cups appearing on the Eurytios crater (*NC.*, pl. 27, no. 780), though these have a heavier offset rim and high conical foot. The comparison is not a close one. It seems hard to derive the fine cups of the Gorgoneion Group from this skyphos type. It is more reasonable to regard them as a development ('with larger foot, greater depth in body and fuller contours') of the Protocorinthian linear cup, perhaps under the influence of the East Greek Vroulia cup type.

The finely decorated examples, as of Payne's Gorgoneion Group, are rare, but the inferior examples with animal frieze (mainly 'eagles' and griffon-birds) are very common in MC/LC contexts in Italy and elsewhere. *CVA Copenhagen* II, pl. 90, 2 (*NC.*, no. 992): ext.: sirens, swans, griffon-birds; int.: Gorgoneion surrounded by tongues, is an intermediate stage between the simpler and more elaborate types with figure decoration.

Add to Payne's list the following:

I. Examples of the common MC/LC type:

(1) *CVA Rodi* II, pl. 5, 3: of inferior LC I style (*Clara Rhodos* IV, 317, fig. 351).

(2) *CVA Cambridge* I, pl. 5, 21 *a–b* (7/26): late, but better than usual; a development of the Samos Group style. Payne compares *NC.*, nos. 1342 ff.

(3) *CVA Madrid* I, pl. 2, 13: grouped together by Amyx, 227, n. 20, with 1 and 2 above, *NC.*, no. 1343, and the pyxis *CVA Sèvres*, pl. 14, 11 and 13.

(4) Langlotz, *Würzburg*, pl. 12, 119: animal friezes, with panther, sirens, sphinxes and a few rosettes. Rough style, late MC.

(5) *Art and Archaeology*, April 1931, 229, from Corinth: two friezes of animals, of MC rather than LC I style. Friezes divided by two narrow bands; very limited filling of rosettes.

(6) *NS* 1936, 133, fig. 21: from Taranto, Vaccarella, Via Nettuno, gr. 43: three examples with swans (? or eagles) and griffon-birds. One cup has rays around the base, the others broad and narrow bands.

(7) Taranto, Museo Nazionale, unpublished: Via Duca di Genova, 14/5/30; Via Nettuno, 7/3/34; Vaccarella, gr. 5 *bis*, 4/8/22; Excav. Arsenale, gr. 247, 7/2/09; Via Leonida, 8/4/24.

(8) Nicholson Museum, Univ. of Sydney, *Handbook*^{2} (1948), pl. III, 47. 02. Goose (or swan?) between griffon-birds. Inferior style.

II. Rather better style than the above:

(1) Orvieto, Museo Civico 967: ext.: panthers, sirens and swans; int.: whirligig. Fairly neat MC style.

(2) Tarquinia, Museo Nazionale: animal frieze of neat MC style.

III. Add to the group of Gorgoneion Cups:

Taranto, Museo Nazionale, Vaccarella, gr. 10, 10/9/26: I: Gorgoneion, surrounded by lotus-palmette chain; on rim, outlined tongues; E: net pattern on the rim; in the larger frieze, riders galloping, seated opposed panthers under the handles, padded dancers; in the smaller frieze, animals. Rather late MC style.

IV. Jacobsthal (in ' Gallia Graeca ', *Préhistoire* (1933)) mentions two cup fragments from Massilia, one in Vasseur (pl. 6, 10), ' coupe profonde, premier style ', the other a fragment of a two-frieze MC cup from La Tourette.

A much more elaborate type is represented by the fragment *Corinth VII*, i, pl. 41, 325. Weinberg regards it as part of a cup with offset rim, and compares the shape of *NC.*, 310, fig. 152. It seems, however, rather heavy and deep for this type, and may belong to a much deeper form of cup with a taller rim; the preserved height is 12.3 cms. On the rim: lotus and palmette chain; a narrow frieze on the upper part of the body contains a lion, a winged Typhon, and one other partially preserved animal; a double band separates this from a wider frieze with a griffon-bird with raised wings; below this is a third frieze, in which parts of a boar and of a lion are preserved. Rays at the base. Heavy filling of incised rosettes and dots; no red enhancement. From the MC well-group; not very late MC. Weinberg compares *NC.*, fig. 55 E for the lotus-palmette chain, and *NC.*, no. 985 for the Typhon.

Note: CVA Copenhagen II, pl. 92, 5 *a–b* (inv. Chr. VIII, 966): cup acquired at Athens, with brown clay, and black lustrous glaze paint. The shape is of the East Greek type of relatively shallow cup with conical foot and offset rim. Reserved are the lip (except for a narrow edging), handle band, and narrow band on the bowl. In the interior medallion: cock to r., and spray with two buds, with incised detail and red enhancement. It is certainly not Corinthian, as the editor claims.

Add to Payne's catalogue the following references:

CVA Louvre VI, pl. 12, 1–6: *NC.*, no. 989.
CVA Louvre VI, pl. 13, 1–9: *NC.*, no. 994.
Boston, Fairbanks, pl. 46, 479: *NC.*, no. 998 (fig. 39 *bis*).
Feytmans, pls. IV–VII (with long description and discussion, pp. 20–7): *NC.*, no. 996.

B. With continuous profile and ring foot (no offset rim).

As far as decoration is concerned the cup without offset rim and with a ring foot *CVA Madrid* I, pl. 2, 13 (inv. 10800), from Aegina, is similar to *CVA Cambridge* I, pl. 5, 21 *a–b* mentioned above, otherwise there is little connection between the cup with offset rim and that with continuous profile. Payne, *NC.*, 297, on nos. 709 ff., does not explain the origin of the latter type, nor does Weinberg (*Corinth VII*, i, 59, no. 211). Both mention its first appearance in the late seventh century. There is, however, at least one excellent frieze-decorated example from Perachora, of the middle seventh century. The shape is very close to that of the East Greek ' Bird Bowls ', and in view of the Protocorinthian example from Perachora it might seem to be derived from this source. An alternative source of the shape might be the shallower type of Protocorinthian kotyle. The cup *Corinth VII*, i, pl. 29, 211 looks at first as if it might be derived from the kotyle type *ibid.*, pl. 16, 107, 108, 111 and 112 (descended in turn from *ibid.*, pl. 13, 80), but the intermediate stages appear to be lacking, and the ring foot of the cup is, of course, much smaller.

Add to Payne's list (*NC.*, 297, nos. 709 ff.) the following:

(1) Bonn, A. Greifenhagen, *AA* LI (1936), 343 ff., no. 7, figs. 8 and 9, inv. 2055: rimless cup with low conical, almost ring foot. In the handle band are birds in ' metope ' divisions (divided by groups of wavy lines), a band below; in the main frieze: subgeometric birds, goats and horse (?); below, two narrow bands and rays. In the interior (on exergual line): man walking side by side with a horse, and holding its mane; two legs only of the horse are shown. Filling of incised rosettes without centres. For the importance of this cup with its combination of incised and unincised decoration, see above, p. 187. Lateish EC.

(2) *Corinth VII*, i, pl. 37, 288: shallow type, with rim slightly inturned, and very small splayed foot. Handle-zone with dot-rosettes; below this, animal frieze, with confronted goat and panther on either side; incised and blob rosettes. On lower part of exterior: broad black band overlaid red and white, and rays. Interior covered black glaze, with red-edged bands near the lip, in the middle of the side wall and around a large white disc on the bottom. Found in the ' EC ' well-group. Perhaps early MC.

(3) *Ibid.*, pl. 29, 211: low wide bowl, with horizontal handles and small ring foot. Reserved band with large rays at the base; the rest covered with reddish-brown glaze. Applied white line and two purple lines just under the handles and just above the rays. From the late Transitional/EC group 202–11.

(4) *Ibid.*, pl. 37, 289: the bowl is a little deeper than in the preceding. It is entirely covered with red to black glaze, with polychrome bands (Weinberg says it has rays around the base, but this is not apparent from the photograph).

(5) *Ibid.*, pl. 37, 308: the foot is incorrectly restored. The shape is similar to the East Greek example, *ibid.*, 307, but it is also not greatly different from the above. Broad handle zone, with water-bird at the centre and dot rosette on either side; below: narrow bands and outline rays. A definite imitation of East Greek.

Note: To either this shape or the type *NC.*, fig. 132 may belong the fragmentary ' bowl with low foot ', Boston, Fairbanks, pl. 38, 340 (interior). It appears to be rather large for a cup with continuous profile; Payne, *NC.*, 297 quotes other fragments of the ' bowl with low foot ', in black-polychrome style. The Boston fragment (from Naucratis; see *NC.*, 340) has on the exterior incised tongues *or* verticals (black-polychrome ?) above the base and one frieze of animals, and on the interior two bands of incised tongues or verticals (black-polychrome) and a frieze of animals. The style (with dot rosettes) appears to be akin to *NC.*, pl. 13, 5, but it is difficult to judge from the inadequate photograph. Transitional.

PHIALAI MESOMPHALOI

For the shape, see *NC.*, 312, nos. 1001–7 (MC), 324, nos. 1349–50 A (LC I). Phialai are rather more common, especially at Perachora in the Middle Corinthian period, than might be inferred from the catalogue in *Necrocorinthia*, but they are never of great importance. They are not, however, all Middle Corinthian. An example of the last quarter of the seventh century is *Perachora* I, pl. 32, 6, fairly certainly dated by the South-East deposit. There is a Transitional example in Berlin (see below), and from the Limenia sanctuary at Perachora comes a group of LPC and Transitional phialai, mainly with scale pattern. Some of the Corinthian examples from the same site might also belong to the last years of the seventh century.

For a general discussion of the phiale in metal as well as in clay, see Heinz Luschey, *Die Phiale* (1939).

Add the following to Payne's list:

(1) *CVA Providence* I, pl. 5, 11 (Acc. no. 25.091). With rough style animal frieze (panthers and goats). MC.

(2) H. Luschey, *Die Phiale*, fig. 9: Berlin inv. 3290. On interior, silhouette birds and groups of zig-zags between dot rosettes. *Ibid.*, fig. 10 (Berlin F 1668) may also be Corinthian.

(3) *Perachora* I, pl. 29, 3: miniature; pl. 32, 6: fragmentary, with rough check pattern; see above.

Add to Payne's catalogue the following reference:

CVA Louvre VI, pl. 10, 2–5: *NC.*, no. 1001. Payne dates it '*c.* 600 B.C.' Amyx, 227, n. 20, puts it later.

LEKANAI

See *NC.*, 312 (MC) and 336 (LC II) for this shape, the precise nature of which is not defined by Payne. The MC example *NC.*, no. 1014 is fragmentary. The LC II type (*ibid.*, 336, fig. 186), which continues in plain ware into the fifth century (see *NC.*, 336, note), shows little or no difference from Payne's other category of ' pyxides with convex sides and horizontal handles ' (*NC.*, 308, fig. 148), of which he lists one example, with linear decoration, which may be LC I (or II?). An allied type is represented by the ' stemmed lekanides ' (*NC.*, 297 and 312), which are, unlike the East Greek ' fruit stands ', also covered dishes, but lack handles. But the lid of the stemmed lekanis has a vertical flange which holds the lid in place, while the lekane proper appears to have a vertical lip over which the lid fits, *cf.* Boston, Fairbanks, pl. 43, 425–6, or else a groove like a kotyle-pyxis. The late example of a lekane, *NC.*, 336, fig. 187 (no. 1530 A) is well on the way to the form of a kotyle-pyxis. *BSA* XXXIX (1938/39), no. 65, pp. 25–6 and fig. 13 (from Polis, Ithaka) resembles this or *NC.*, no. 1529; very late?

Something of the same shape appears in seventh-century Attica. *Cf.* the examples (all Attic) from the Phaleron graves republished by R. S. Young, *AJA* XLVI (1942): gr. 56. 2 (fig. 5; first quarter of the seventh century); gr. 37. 3 (fig. 14; *c.* 675 B.C.); gr. 48. 7 (fig. 19; *c.* 675–50 B.C.); gr. 32. 6 (fig. 21, of the same date), all of which are fairly deep and have the lid fitting over the rim. Rather different, of shallower form, are gr. 18 A. 2 (fig. 27; last quarter of the seventh century) and gr. 62. 2 (second quarter of the seventh century—dated too early?). All these are called ‘ lidded skyphoi ’ by Young, regardless of their depth. He observes on this shape in Attica of the seventh century (*op. cit.*, 48): ‘ The lidded skyphos with inturned rim was probably the Attic counterpart of the Protocorinthian pyxis. The shape may originally have been Corinthian; a fragment of a late Geometric vase of this shape, made of Corinthian clay, was found in the votive deposit at the Agora, and the form does not appear to have been in use in Attica during the Geometric period ’. If this is so there appears to have been a considerable gap in the Corinthian development.

One curious example of this shape (not in *NC.*) may be mentioned here: *CVA Cambridge* II, pl. 16, 5 *a–b* (inv. 29.21). It is fully described by Miss Lamb, to whose account in *CVA* reference may be made. It is called by her ‘ Middle Corinthian, 600–575 B.C.’. Its shape in general is as Payne, *NC.*, fig. 148, but the foot is a little wider, the knob wider and the lid slightly domed. The buff clay is Corinthian enough; Miss Lamb makes no distinction between the brown (glaze?) and red (paint?). The style seems oddly un-Corinthian; *cf.* the lions and panthers; the latter, indeed, seem more Attic. The filling, with its diverse forms of dot rosettes, solid rosettes, crosses with and without chevrons in the angles, and stars, seems strongly influenced by East Greece, to which area the vase may belong.

Note :

A shape not very different from the lekane is Payne’s bowl with slightly offset rim and reflex handles (*NC.*, no. 716 ff., and fig. 132). The shape is not a common one. To the examples listed by Payne add the following:

Toronto, RHI, pl. 13, 186 (C 247) from Castel d’Asso, near Viterbo: shape as *NC.*, fig. 132; interior decorated with black-polychrome bands; lip covered black glaze, overlaid with white lines; on the exterior, between the handles, zig-zag line; below, one frieze with panthers, goats and owl; filling of incised rosettes and blobs. Early MC? It appears to be Corinthian though the plate in which it is figured contains mainly Etrusco-Corinthian and Boeotian pottery.

PLATES

See *NC.*, 280 (Transitional), 297 (EC), 312 (MC). At that stage the shape seems to stop, except for a few examples very late, *NC.*, 336 (LC II). It is pointed out in *Perachora* I, 62, n. 8, that one of Payne’s two EC examples (no. 721) is perhaps Early Protocorinthian. *Perachora* I, pl. 32, 1, from the Agora South East deposit and therefore probably belonging to the period between 630 and 600 B.C., appears to have a handle, and therefore should be classed with a type of linear dish, which is curiously rare in published museum collections, but very common at Perachora. There are a few EC plates from Perachora, but the shape is certainly not common before the sixth century.

Add to Payne's list the following:

(1) *CVA Univ. of California* I, pl. 6, 4 *a–b* (8/104). Concentric circles on the underside; lotus-palmette complex in the tondo on the upper side. Close to the style of the Chimaera Group.

(2) *BullMetrMus* 1941, 187–8. Acc. no. 41.11.1. Pale yellow clay, ' covered front and back with a yellow slip, of which traces remain here and there'. A drawing is given *op. cit.*, 188, fig. 1. Chimaera to l., filling the tondo; the snake tail extends to the rim. Filling of large and small neat incised rosettes with double centres. Bands at the junction of rim and tondo, and on the outer edge; usual mouldings and concentric circles on the reverse. Richter attributes the plate to the Chimaera Painter, comparing *NC.*, nos. 1040 and 1041 (plates) and the pyxis in Bonn (*NC.*, no. 892).

(3) *BSA* XXXIX (1938/39), 25, no. 67, pls. 11–12. From the cave at Polis, Ithaka. Upper side: lotus-palmette chain on rim, with bands at edges of rim; in tondo, at centre, dot-and-band circle enclosing whirligig of wings; around this circular frieze with panthers, goat, long-necked bird and cocks confronted with double lotus between; thick filling of rosettes and small incised blobs. On underside: single moulding covered black glaze and red paint; in tondo: fine cock to r. Late MC. Akin to *NC.*, no. 887?

Add to Payne's catalogue the following references:

(1) *CVA Louvre* VI, pl. 8, 1–4 and pl. 9: *NC.*, no. 1041.
(2) *Ibid.*, pl. 8, 2, 3 and 5: *NC.*, no. 1045.
(3) *CVA Louvre* VIII, pl. 23, 6: *NC.*, no. 1050. This appears to have been published twice in *CVA* by Pottier. See Payne's ref. under no. 1050.
(4) *CVA Oxford* II, pl. 6, 15–17: *NC.*, no. 1037.
(5) Dugas, *Délos* XVII, pl. 62, 145: *NC.*, no. 1042.
(6) *MA* XXXII, pl. 86, 9: *NC.*, no. 1052.

Note: Amyx, 229, n. 73, suggests that the fragment *MA* XVII, 615, fig. 424, may be from a plate rather than a lid, and may be related to the Chimaera Group. He compares *NC.*, no. 1045 for the siren and the California plate (1 above) for the floral.

KOTHONS

For a discussion of this shape and its use, which is obscure, see Burrows and Ure, *JHS* 1911, 72 ff.; Caskey, *Attic Vase Paintings in Boston*, 49 ff.; Pottier, *CVA Louvre* XII, text to III Ca, pl. 22, 1 ff.; Robinson, *CVA Robinson Collection, Baltimore*, text to pl. 15, 3; P. N. Ure, ' Kothons and Kufas ', *AE* 1937, 258 ff. Payne lists EC examples in *NC.*, 297–8, MC, 314, and LC II, 335. Payne (*NC.*, 298) ascribes the earliest kothons to Crete (for exx. cf. *NC.*, 298, n. 1), and believes the shape was first adopted at Corinth in the EC period, but *cf.* Neugebauer, *Antiken*, pl. 61, 147, a ' kothon ' with light yellow clay, and decorated in blackish-brown glaze in geometric linear and animal style. Neugebauer calls it Corinthian and dates it to the eighth century. The find-place is unknown, but it could be Corinthian, and appears earlier than other known exx. The shape becomes very common in the late periods, and variant forms appear (*cf.* no. 7 below) with linear decoration, often showing great skill. The variant handle types (' knucklebone ' and band handle either reflexed or simple) can hardly be used as a means of dating since both types are used in the earlier period (cf. *NC.*, nos. 722 ff.) and even together on one pot (cf. *Délos* X, pl. 37, 528 *a–b*). After the MC period only the reflexed or simple band types appear. Consequently it is often impossible to distinguish the earlier linear examples from the later ones, which extend into the fifth century. Few of the examples with animal frieze are of good style; *NC.*, no. 724, in the 'white-dot style' (Langlotz, *Würzburg*, pl. 9, 118) is the most elaborate.

Payne catalogues only a selection, to which add the following:

(1) *CVA Louvre* VIII, pl. 22, 1–16: a good selection of examples with both types of handle. Those with knucklebone handles have poor animal-frieze decoration; those with flat reflexed handles are linear LC I–II.

(2) *Corinth VII*, i, pl. 29, 217: with rather rough style animal frieze, and white 'dot-and-circle' rosettes on the lip; reflexed handles; EC. Pl. 37: 296, linear, with dot rosettes on the shoulder; simple band handle; 297: linear, with dot rosettes and vertical zig-zags on the shoulder; handle as before; 298: black-polychrome decoration; handle as before. All from the 'EC' well-group 218–311, and therefore not later than early MC period.

(3) *Albania* 1932, 14, no. 4, fig. 10: knucklebone ex. with MC animal frieze, associated with other late MC pottery in a pithos burial at the site of Apollonia in Illyria.

(4) *CVA Poland* I (Goluchow), inv. 4: on the upper side a frieze of animals and birds. Reflexed handles. If Corinthian it is late, but it is not certainly Corinthian.

(5) There are numbers from the Italian excavations on Rhodes; cf. *Clara Rhodos* III, 150–1, fig. 143, Ialysos, gr. 148: a white kothon, perhaps not Corinthian, found with a late b.f. lekythos; *cf.* gr. 172, fig. 166. *Cf.* also *Clara Rhodos* IV, Makri Langoni, gr. 75, kothon in a late context (between 540 and 530 B.C.); *ibid.*, gr. 133 (end of the sixth century) and gr. 167 (of the same date); *ibid.*, gr. 718, one of each handle type in an EC to LC context; the example in gr. 23 may not be Corinthian.

(6) *CVA Oxford* II, pl. 2, 29–31; *CVA Univ. of California* I, pl. 10, 1 *a–b*; *Délos*, XVII, pl. 58, 111; Langlotz, *Würzburg*, pl. 9, 125: all of the 'White Style' with reflex handles. Another 'White Style' example with a simple ring handle is *Albania* 1932, 16, no. 4, fig. 14, found with two linear reflexed-handle examples and other late MC pottery in a pithos grave on the site of Apollonia in Illyria.

(7) Bonn, A. Greifenhagen, *AA* LI (1936), 343 ff., fig. 17 and 19: an unusually elaborate example (no. 16; inv. 1151) of rectangular section with reflexed handles and a high base, and with polychrome decoration. Note especially the Cretan effect of the outline tongues in white on the base. Fine style. Greifenhagen dates it to the period 550–500 B.C., and compares Heidelberg inv. VI, 10 from the same workshop. Kothons with rectangular section, and the allied shape, the tripod-kothon, are all late, though perhaps not all are as late as LC II.

(8) Toronto, RHI, pl. 13, 184 (C 248). With knucklebone handles. Incised verticals on the lip; on the exterior, in each of the three sections between the handles, three geese walking to r.; filling of incised rosettes. Neat style. Early?

Note: The tripod-kothon or tripod-pyxis *CVA Copenhagen* II, IIIC, pl. 85, 3, with 'slab' legs and struts from bowl to legs (inv. 4714, from Thebes), is probably Boeotian. Note the red crosses and dot rosettes on the black glaze. The clay is light brown, the black glaze greyish in parts.

OINOCHOAI WITH TREFOIL MOUTH AND NARROW FOOT

I. The variations of the shape are illustrated by Payne, *NC.*, 33, fig. 10. See also *NC.*, 271 (LPC), 277 (Transitional), 298 (EC), 314 (MC), 325 (LC I, when the shape suffers a decline).

In *Corinth VII*, i, are published nine fragmentary examples (pl. 24, 181; pl. 25, 186; pl. 28, 204; pl. 29, 205; pl. 31, 225, 226 and 227; pl. 32, 228; pl. 44, 371) and a large fragment (pl. 29, 206). These, of some interest as confirming Payne's dating (*NC.*, 33, fig. 10) of the variant shapes, should be mentioned first. 181, from the well-group of the third quarter of the seventh century (mainly dated by 181) containing nos. 174–82, is in shape most like Payne's LPC form, fig. 10 B. So is 186, a single find, but of distinctive LPC/Transitional style; almost of the same shape, but with flatter shoulder, is the rough Transitional jug from the eighth Opferrinne in the Athens Kerameikos, *JHS* 1933, 272 (Ker. phot. 2706). 204 and possibly 206, from Weinberg's ' EC ' group nos. 202–11, are in shape most like Payne's Transitional, fig. 10 C. There exists a good deal of Transitional pottery in similar heavy and roughly-drawn style, with the same ' dot-and-circle ' rosettes. 205, of later style (with incised rosettes only), appears to be slightly later in shape also, between figs. 10 C and D. Very similar in shape to the last is 226, with some ' dot-and-circle ' rosettes, from the ' EC ' well-group 218–311, dated by Weinberg to *c.* 600 B.C. but probably extending from LPC into MC. Also from the same well-group are 225 (by the Sphinx Painter), with mouth and neck much as *NC.*, fig. 10 G (which is MC), but with rounded shoulder more like fig. 10 D, and 227–8, with black-polychrome decoration, of a squat (early?) shape. 371, with the same type of decoration, is probably LC (it was an isolated find), and may be compared to *NC.*, fig. 10 H. The base bears a close resemblance to that of late kotylai. 331 (pl. 41) is not included in the above, since it already appears in Payne's Catalogue (no. 1096). It was found in the MC well-group, and there can be no doubt of its period.

181 is a good example of LPC black-polychrome, with incised verticals on the shoulder and large rays around the base. 227–8 are of the later polychrome style, but not so late as 371. 186 has black-polychrome decoration with one animal frieze (no filling) of late LPC or Transitional style; Weinberg compares *NC.*, pls. 11, 1 and 11 *bis*, and no. 33. All the rest are of the type with single shoulder frieze and rays around the base. With the exception of 225 by the Sphinx Painter (lotus with volutes between swans) their quality is poor.

II. In addition to the above add to Payne's list the following:

(1) *CVA Louvre* VIII, pl. 24, 10–11: incised verticals on shoulder; one frieze with thin silhouette animals and blob and cross filling. The silhouette animals are of the ' straggling ' type. See Appendix on Silhouette Style, p. 190.

(2) *CVA Hague* I, pl. 3, 1 (inv. 1860): ovoid body with very flat shoulder. Three friezes of animals; rays around base. This jug, which was found in Egypt, has pale brown clay. The editor suggests a comparison with Pottier, *Louvre*, pl. 41, E 430, which is obviously Etrusco-Corinthian, and with Masner, *Vasensml. Wien*, 128 (*NC.*, no. 737). The shape and style are very unusual, but it may well be Corinthian, and possibly early. Also published (different view) in *Amsterdam, Gids*, pl. 56. Amyx, 231, n. 114, groups it together with olpai in Providence and Paris (Louvre E 438), and with (4) below, as by the same hand.

(3) *CVA Univ. of California* I, pl. 6, 1 (inv. 8/3496): shape as *NC.*, fig. 10 D. Mouth and neck covered black glaze; three friezes of animals; rays around base. Neat incision; thick filling of incised rosettes and blobs. The drawing of the animals is midway between the ' miniature ' and ' heavy ' styles. EC.

(4) Toronto, RHI, pl. 14, 189 (C 255). Of early shape, as *NC.*, fig. 10 D, but the neck

slopes inwards and upwards; no rotelles; flat handle. White dot-rosettes on the mouth and short neck. Three friezes divided by black-polychrome bands; rays below. The photograph is poor, but as far as can be judged the vase is Corinthian, not an imitation. In the friezes, panthers, doe, etc., with filling of neat incised rosettes and dots. EC, tending to the ' miniature style ', with neat drawing and incision. See (2) above for its connection with other vases.

(5) *Ibid.*, pl. 14, 190 (C 256). Of fairly early shape, body as *NC.*, fig. 10 D, but the neck as fig. 10 C. White dot-rosettes on mouth and neck. Three friezes divided by black-polychrome bands; broad black-polychrome band between bottom frieze and rays. In the friezes are the usual animals including lions and bulls. Very thick filling of incised rosettes, incised blobs and dots. Inferior, heavy, rather elongated style, not very far from the Scale-pattern Group. Early MC?

(6) Dugas, *Délos* XVII, pl. 62, 141: very fragmentary, mainly plaster. Earlyish shape and style. Incised tongues on shoulder. One frieze, of which few traces remain. Rays below. *Ibid.*, pl. 62, 142: shape as in the preceding example, but the mouth and neck are narrower. The decoration is also the same, but the rays are shorter. Very few fragments of the frieze remain. EC?

(7) *Art and Archaeology*, April, 1931, 230: shape obviously later than *NC.*, fig. 10 H. The characteristics of lateness are: the flat shoulder, tapering lower part of the body, and the heavy base-moulding. The mouth and neck are covered with black glaze; on the body are two friezes of intertwined lotus buds, and rays. A good example of LC II, or at any rate of the style which developed into LC II.

(8) *CVA Rodi* I, pl. 1, 1 (inv. 12567): late shape, with two plastic ridges around the neck, narrow base and heavy foot (in the latter particular *cf.* contemporary kotylai and (7) above). Two friezes divided by dot-and-band; broad band and rays below. By the same hand as Payne, *NC.*, no. 898 (pl. 29, 7), *i.e.*, Amyx's ' Ampersand Painter '. From Kamiros, Checraci, gr. 17; *Clara Rhodos* IV, 364, figs. 413–14. See Jacobsthal, *GGA* 1933, i–ii, 14, for the dipinto inscription BV (εὖ) on the base. *Ibid.*, pl. 1, 3 (inv. 10719): incised verticals on the shoulder; two friezes of silhouette animals; broad band and rays below. See Appendix on Silhouette Style, p. 191, for a discussion of this style. From Ialysos, gr. 88; *Clara Rhodos* III, 120, fig. 114. Called by Jacopi ' rodia della decadenza '. It was found with the Laconian cup, *ibid.*, figs. 115–16 (see *BSA* XXXIV, 180). *Ibid.*, pl. 1, 4 (inv. 12096): the nearest shape, oddly enough in view of the style, is Payne, *NC.*, fig. 10 C. There are three friezes of animals of a common MC type, mostly well-proportioned, and a thick filling of rosettes, blobs and dots. From Kamiros, Makri Langoni, grave 5; *Clara Rhodos* IV, 54, fig. 27. Pointed aryballoi occur in this grave, but frequently the contents of a grave (even if it contains only one burial) cover a considerable period. Here there may be two groups; see above p. 173, n. 47.

(9) *Clara Rhodos* IV, Makri Langoni, grave 3, 14 (inv. 12031): the vase is worn and the decoration difficult to make out in a group photograph. The nearest of Payne's shapes is *NC.*, fig. 10 C, but the neck of this vase is in the form of a truncated cone. There are incised verticals on the shoulder, one frieze of animals on the body; and the lower part of the latter is covered with black glaze. The animals in the frieze appear to be of the heavy early type, with dot-and-circle filling. Transitional? Found with late ovoid aryballoi, pointed aryballoi, and EC Type A alabastra. *Ibid.*, Makri Langoni, grave 9, 4 (inv. 12193): with trefoil mouth and neck as *NC.*, no. 1392, but with a body intermediate between the oinochoe with narrow foot and the globular oinochoe. It is covered with black glaze with pairs of narrow purple bands at intervals. Found with Fikellura (*BSA* XXXIV, 30, no. 1) and late Attic b.f. The grave was a disturbed one and may contain two burials, but such an assumption is not necessary since spherical jugs, at any rate, with this type of decoration are believed by Payne to be very late (*NC.*, 337), and so may be also this example of somewhat different shape.

(10) *Albania* 1932, 10 and 15, no. 4, fig. 13: plastic ring at the junction of trefoil lip and neck, and another at the junction of neck and body; heavy base ring. Incised verticals on the shoulder; one frieze; broad band and rays below. Its style, in the present writer's opinion, is close to *NC.*, no. 898 (*cf.* no. 8, i, above), *i.e.*, Amyx's ' Ampersand Painter ', and

by the same hand are an olpe and a broad-bottomed oinochoe found in the same pithos burial on the site of Apollonia in Illyria. Amyx, however, 232, n. 127, regards the b.b. oinochoe as only ' related ' to the olpe and narrow-bottomed oinochoe, and ascribes the latter two vases to the painter of *NC.*, no. 908, whose works are wellnigh as bad. This painter, as Dunbabin points out to the present writer, should be called the ' Triantaphyllos Painter ' from the former owner of *NC.*, no. 908. A black-polychrome jug (with incised verticals on the shoulder and rays around the base) of much the same shape as the foregoing comes from the same burial.

(11) Coliu, *Musée Kalinderu*, no. 15, figs. 26–7: medium size; ovoid body; neck and mouth rather big for the rest of the pot. Two friezes, bands and rays. Rough heavy lateish MC style. Interesting only for its possible Euxine provenience.

(12) *Ann.* X–XII, 104 and pl. 14: jug with two friezes, found in pithos grave 24 at Arkades. The shape is not exactly paralleled in Payne, *NC.*, fig. 10; its greatest width is about halfway down the body. The style is difficult to judge since the drawing in pl. 14 appears inadequate, but the shape seems early, and the decoration may be EC. It is the only noteworthy vase of the Corinthian fabric from Arkades.

(13) *CVA Univ. of California* I, pl. 10, 4 (inv. 8/106): shape as *NC.*, fig. 10 H. Fine example of the ' White Style '; cf. *CVA Oxford* II, pl. 5, 16.

(14) *Corinth VII*, i, pl. 23, 166: jug with an ovoid body, short broad neck, trefoil mouth and vertical handle not rising above the level of the mouth. It appears to have two reserved bands on the neck, and wide reserved bands on the shoulder and lower part of the body, filled with large rays radiating from the neck and base respectively. The rest of the body is covered with red-to-black glaze. It comes from the Agora well-group dated to the third quarter of the seventh century. As Weinberg points out, however, nos. 153–6 from the same group are earlier than this period, and ' the shape of this oinochoe, with its rather full ovoid body, wide low neck, and without high handle or a sharply marked shoulder, is more like Late Geometric oinochoai than it is like the usual oinochoai of the LPC period '. Dependent rays are common on Protocorinthian conical oinochoai, but on such a shape as this they suggest an imitation of East Greek. But cf. *CVA Deutschland* II, *Berlin* I, pl. 3, 2.

(15) Delphi: fragment of an oinochoe by the same hand as *NC.*, nos. 1392, 1393 (HP).

(16) Two unpublished (?) jugs of this type may be mentioned here: (i) in Palermo, from the excavations at Selinus in 1888; large ex., with ' potnia theron ' in panel on neck; four friezes of animals on the body. Probably MC. (ii) In Bari, from Capua (?), with two friezes, broad band and rays. MC, near the style of the Dodwell Painter.

III. The following are of uncertain fabric:

(1) *CVA Hoppin Collection*, pl. 1, 1: curious style animal frieze, with dot filling; pale yellow clay. It appears to be Italo-Corinthian, despite the fact that it was bought in Athens in 1898.

(2) The jug, Dugas, *Délos* XVII, pl. 62, 143, suggested as Corinthian by Dugas, could in that case be only LC II. But it is surely ' Melian '. The shape and decoration are quite un-Corinthian.

(3) The jug, *NS* 1940, 322, fig. 12, from Taranto, does not appear to be Corinthian, but it is difficult to judge from the photograph.

(4) Worthy of comment is the fragmentary jug, *Clara Rhodos* VI–VII, Papatislures, gr. 28, inv. 13836, fig. 105. Among the other vases found with it were two East Greek jugs (Rumpf's ' Kamirosgattung ', group III b C 16 and group III b D 14; see *JdI* 1933, 69–83), two dishes on a high base (Rumpf's ' Kamirosgattung ', group III i 71, and another, inv. 13838), and two Corinthian aryballoi, apparently decorated with shielded warriors and padded dancers. The period of the aryballoi is difficult to make out; they may be MC, but probably not LC I to judge from the shapes; they could be early. Thus the general context appears early, but its evidence is of little value for dating the jug under discussion, since the whole collection of vases was found in a ' tomba a camera ' with two skeletons and in a poor state of preservation; to say nothing of the fact that a black-glazed deep cup with offset rim, which appears in the general photograph, is not accounted for in the catalogue of the grave group.

The jug is of a shape much as Payne, *NC.*, Fig. 10 C, but with a concave neck profile. The colour of the clay is not mentioned, but the frieze is said to have a ' fondo roseo '; the glaze is brown and the enhancement violet. The base and the lower portion of the body are lost. Incised verticals or tongues decorate the shoulder, and below these is one frieze of animals (lion, goat, lion, stag, etc.); the remainder is covered with black glaze. The style is not neat, and the incision is rather scrappy; filling of dot rosettes. It has some faint resemblance to LPC or Transitional; Jacopi suggests a local origin. *Cf.* the fragmentary jug from the ' Stipe Votiva ' at Kamiros, inv. 14709, *Clara Rhodos* VI–VII, 362 (XII 13), and fig. 102, which appears to be East Greek made under Transitional Corinthian influence.

Add to Payne's catalogue the following references:

(1) Buschor, *Griechische Vasen* (1940), 33, fig. 40: *NC.*, no. 122.
(2) *CVA Louvre* VIII, pl. 24, 1–2: *NC.*, no. 128.
(3) Payne, *Protokorinthische Vasenmalerei*, pl. 31, 1: *NC.*, no. 138.
(4) *CVA Oxford* I, pl. 5, 16: *NC.*, no. 1379; pl. 5, 15: *NC.*, no. 745.
(5) Langlotz, *Würzburg*, pl. 9, 113: *NC.*, no. 745. See Payne's note on this good example of the early black-polychrome style; the only one definitely identified by Payne as EC.
(6) *Corinth VII*, i, pl. 41, 331: *NC.*, no. 1096.
(7) Smith, *Origin of Chalcidian Ware*, pls. 14–15, figs. D–E: *NC.*, no. 1405 (ascribed by Smith to the Tydeus Painter).
(8) Quennell, *Archaic Greece*, fig. 41: *NC.*, no. 1090.
(9) Neugebauer, *Führer*, pl. 12 r.: *NC.*, no. 1104.

GLOBULAR OINOCHOAI

The shape is discussed by Payne, *NC.*, 315, where one MC example is listed; 325 (LC I), and 337 (LC II). It is one of the characteristic shapes of the LC I period; examples occur with trefoil or round mouth. In the LC II period considerable numbers were made of a more or less spherical shape, with a small trefoil mouth or the peculiar round mouth which is something similar to that of a late aryballos (cf. *NC.*, 337, figs. 193–4). Most of these spherical jugs are very late, but some may be earlier than LC II.

Add to Payne's list the following:

(1) *CVA Rodi* II, pl. 3, 1 (inv. 1310): round-mouthed jug with spherical body. Panther and goat on the shoulder, of crude MC style; bands on the rest of the body. See *Ann.* VI–VII, 269.

(2) *AJA* 1930, 541, fig. 21: example with broad neck and high handle. The decoration cannot be distinguished in the photograph.

(3) *AJA* 1931, 10, fig. 5: fragment of a jug of this shape? It might belong to a pyxis, hardly to a krater. The surviving decoration consists of polychrome tongues at the junction of neck and shoulder, and part of a scene with warriors (one with an elaborate helmet) and a female figure, in the LC I polychrome style.

(4) To the list of black-polychrome flattened spherical jugs with either trefoil or round mouth (as *NC.*, fig. 194), add the following: *CVA Musée Rodin*, pl. 6, 6 (982); *CVA Oxford* II, pl. 4, 4 (1874.381); *CVA Madrid*, pl. 2, 4–8; Langlotz, *Würzburg*, pl. 9, 112.

Note: The example Boston, Fairbanks, pl. 64, 554 (Payne, *NC.*, 341; LC I) may have connections with the ' Delicate Style '; *cf.* Amyx, 210 and n. 21.

The shape (as in *Corinth VII*, i, pl. 32, 231, from the ‘ EC ’ well-group 218–311) with ring foot and bulbous body, called by Weinberg, *ibid.*, a ‘ round-mouthed oinochoe ’, stands between the olpe and the globular oinochoe with round mouth. The example quoted above, the earliest of the type, has a shallow, broad, slightly out-splayed mouth. There is a reserved zone on the upper part of the body, with padded dancers and a ring rosette in the field. The handle is tall and flat. It may be EC, but looks later in style. *Ibid.*, pl. 41, 332 and 333, have a broader body, and a taller cylindrical neck. They are from the MC well-group 331–60. Late MC/LC I style (siren on the front of each, with a wide black band below with applied white); no filling. As Weinberg points out, the shape and especially the neck form of the later examples is common in late sixth- and fifth-century pottery of Corinthian manufacture (cf. *Hesperia* VI, 294, nos. 148–50; VII, 596, nos. 145–9).

Add to Payne's catalogue the following references:

CVA Louvre VI, pl. 7, 7–8 is *NC.*, no. 1394. *Ibid.*, pl. 7, 12–13 (CA 4) is *NC.*, no. 1405 A, a spherical oinochoe with trefoil mouth and high handle, decorated in the red-ground style. Payne (*NC.*, 341) described this as a ‘ beaked oinochoe ’, but contrast it with *NC.*, no. 1405, which has a real ‘ beaked ’ mouth.

BROAD-BOTTOMED OINOCHOAI

See *NC.*, 277 (Transitional; no. 138, Late Transitional, has a narrow neck with central flange); 299 (EC, where Payne points out that the two varieties (high- and low-necked) known in the Protocorinthian period (cf. *VS*, pl. 19, 3–5) continue in the EC and MC periods, and that Corinthian examples in the MC and LC periods become taller than in Protocorinthian, as do several other shapes); 315 (MC); 325 (LC I). The shape seems to die out (except for linear examples) in the LC I period, but appears again in a variety of forms in LC II.

There is usually no difficulty in distinguishing between Protocorinthian and Corinthian examples of the shape, but there seems to be some uncertainty about the fragment *Corinth VII*, i, pl. 17, 131. It is covered with black glaze, with an applied white line. It is dated by Weinberg to the very end of the eighth century, since it was found in the well-group 116–34. Weinberg says of it: ‘ The appearance of the shape here is a few decades earlier than the suspected period of origin of the shape. The decoration is unusual for broad-bottomed oinochoai ’. In fact it looks very like a fragment of a broad-bottomed oinochoe of a date well on in the Corinthian period, though the single white line on the glaze ground (*cf.* the kotylai from the same well-group) would be unusual for the Corinthian period.

Both variant shapes were used at the same period, cf. *CVA Copenhagen* II, pl. 88, 3 and 5, both by the Dodwell Painter. Good examples of the variants are *CVA Hague* I, pl. 3, 2 and 3, but there are considerable minor variations within each group.

Add to Payne's list the following:

(A) Type with narrow neck, usually with a flange in the middle of the neck (but not always; cf. *Corinth VII*, i, pl. 28, 198):

(1) *CVA Copenhagen* II, pl. 88, 4 (inv. Chr. VIII, 844). Sloping shoulder; convex side. Incised verticals on shoulder; one frieze; triangles around base. Crude heavy style MC.

(2) *CVA Cambridge* I, pl. 5, 16 (G 83). Short neck. Swans in shoulder frieze; goat, lion, panthers and swans in main frieze. Heavy inferior MC style.

(3) *CVA Hague* I, pl. 3, 2. Rounded shoulder. Black-polychrome decoration, with incised verticals on shoulder, and triangles around base.

(4) *CVA Musée Rodin*, pl. 6, 1–2. Convex side; triangles around base. Two friezes in heavy MC style.

(5) *CVA Madrid*, pl. 4, 4 (inv. 10792). Side slopes out to base. Two friezes, of fairly neat EC/MC style.

(6) *Ibid.*, pl. 4, 5 (inv. 10793). Shoulder very flat; side more or less vertical; projecting moulding around base. Two friezes. MC. By the Dodwell Painter, or related.

(7) *CVA Providence*, pl. 6, 2 (C 2209). Flat shoulder; slightly convex side. Triangles around the base; two friezes. Not far from the Dodwell Painter in his better style (cf. *CVA Copenhagen* II, pl. 88, 5). Amyx, 232, n. 131, calls it ' of late Dodwellian character '.

(8) *AA* XLV (1930), 21, fig. 5 and 24 (Hermitage, inv. 5705). Flattish shoulder; vertical side. Two friezes divided by dot-and-band; below, broad band overlaid polychrome, and triangles. MC, perhaps belonging to the Dodwell Painter group.

(9) Coliu, *Musée Kalinderu*, inv. no. 14, figs. 24–5. Flat shoulder, vertical side. Two friezes; below, broad band and rays. Group of the Dodwell Painter.

(10) Boston, Fairbanks, pl. 45, 470 (inv. 89.185). Horizontal shoulder, vertical side. Two friezes divided by dot-and-band. Panthers, etc., thick filling of incised rosettes and dots. Below, band and short rays. Not far in style from *NC.*, pl. 29, 5. Late MC. A good black-polychrome example, *ibid.*, no. 472.

(11) Toronto, RHI, pl. 13, 183 (C 245). Complete with lid. More or less horizontal shoulder. Shoulder frieze divided from the main frieze by dot-and-band; broad band and neat rays below. In the friezes: panthers, swans, sirens. Filling of incised rosettes and dots. Cf. *NC.*, pl. 28, 12 and the convex pyxis with upright handles, in Toronto, C 244 (*op. cit.*, pl. 13, 182). Late MC.

(B) Type with broad neck:

(1) *CVA Brussels* I, pl. 3, 4 *a–b* (inv. 202). Sloping shoulder. Two friezes; tongues around the base. MC.

(2) *Ibid.*, pl. 3, 6 *a–b* (inv. A 206). Sloping shoulder. Tongues on shoulder; bands around base. One frieze, with thick filling of blobs, incised rosettes and dots. It may have a red ground. LC I?

(3) *CVA Louvre* VI, pl. 7, 4–6 (inv. CA 2). See *NC.*, 341. Sloping shoulder; vertical sides. Two friezes. Neat and early stage of the Dodwell Painter. A good example illustrating the transition from the early neat style. Very early MC. Cf. *CVA Louvre* VIII, pl. 24, 3–4 for a stage further on in the process of attenuation (*NC.*, no. 1124).

(4) *CVA Oxford* II, pl. 5, 17 (1884.688). Curved shoulder; straight sides. Incised verticals on shoulder; rays around base. One narrow frieze. Payne dates it to the end of the MC period, and compares *NC.*, nos. 1130–3. Amyx suggests (230, n. 96) ' a loose connection ' with the San Simeon oinochoe, *ibid.*, pl. 30 *a–c*. It seems very doubtful.

(5) *CVA Madrid*, pl. 4, 6 (inv. 10791). Slightly curving sides. Two friezes. MC heavy style.

(6) *CVA Robinson Coll.*, pl. 16, 1. Sloping shoulder; straight vertical side. The single frieze is narrow in comparison with the rest of the decoration. Broad band below the frieze, and triangles. Mediocre late MC style.

(7) *CVA Univ. of California* I, pl. 10, 3 (8/105). Small ex., with short broad neck, though not so broad as in some examples (contrast *CVA Hague* I, pl. 3, 3). 'White Style' or imitation.

(8) Amyx, 221, and pls. 30 *a–c*, and 31 *b* (SSW. 10091). Sloping shoulder. Incised verticals on the shoulder; bands around the base. Dated by Amyx to the end of the MC period, and not far from the 'Scale-pattern' Group. See (4) above.

(9) *AJA* 1930, 541, fig. 21. In a group of vases found beside grave 139 in the North Cemetery at Corinth. Sloping shoulder; the side slopes out to the base. Two friezes; triangles around the base. Fairly late MC style.

(10) *Albania*, 1932, 8, no. 4, 10, fig. 4, and 13, fig. 9. Very short squat neck, flat shoulder, and more or less vertical sides. Two friezes, below which broad polychrome band and triangles. By the same hand as the olpe and s.b. oinochoe found in the same pithos burial (with kothons and an imitation 'Samos Group' kotyle) at the site of Apollonia in Illyria. Close to or by the same hand as *NC.*, no. 898 (Amyx's 'Ampersand Painter'), but see above on s.b. oinochoe (10).

(11) *Ibid.*, 16, fig. 15. From the same burial as the foregoing. Small inferior or imitation 'White Style' example, with sides sloping out to the base. Interesting only for its late MC dating, unless this jug and the kothons from the same burial are later than the figured vases.

(12) *Corinth VII*, i, pl. 30, 222. Fragmentary, and might be of either type. Incised verticals on the shoulder. One animal frieze between broad bands overlaid polychrome; triangles around the base. From the 'EC' well-group 218–311. Animals of elongated style with short legs. Late EC/MC. Amyx, 231, n. 107, compares it to *NC.*, no. 749.

From the same well-group comes a miniature black-polychrome example.

Add to Payne's catalogue the following references:

NC., no. 1124 is published in *CVA Louvre* VIII, pl. 24, 3–4; no. 749 in *CVA Oxford* II, pl. 6, 6; no. 1123 in E. von Mercklin, *Führer*, no. 53, pl. 7; no. 1114 in *CVA Cambridge* I, pl. 5, 17; no. 1132 in Boston, Fairbanks, pl. 45, no. 471.

CONICAL OINOCHOAI

This is predominantly a Protocorinthian and Early Corinthian shape, and even in the latter period it is less important than in Protocorinthian, and examples of it do not attain the same considerable size. See Payne, *NC.*, 272 (LPC); in republishing no. 36 in *PV*, pl. 15, 4, and p. 22, he puts it back into the MPC period. *Ibid.*, 277 (Transitional), 299 (EC). He lists no examples in the MC section of his catalogue, but nos. 755–7, of late seventh/early sixth century date, with incised verticals as well as frieze decoration, and those in the black-polychrome style (*NC.*, no. 758), undoubtedly continue into the sixth century. *NC.*, fig. 192 appears to be a LC II revival. A number of Perachora (Limenia) examples are almost certainly MC.

Add to Payne's list the following :

(1) *Corinth VII*, i, pl. 25, 185: fragment of body, with incised polychrome tongues on the shoulder, triangles around the base, and a single frieze, edged with dot-and-band. The frieze contains (l. to r.) a warrior with shield, moving to r., and a combat of two warriors with spears and shields, Their helmets have high crests. No filling. The figures are long-legged and heavy-thighed. Transitional style. Single find. Pl. 28, 199. Neck fragment, with one frieze in a very neat ' miniature ' style, with very carefully drawn linear ornament. EC. Sporadic find from the Corinthian Agora.

(2) Unpublished (?) in Taranto: large example by the Dodwell Painter, found in Taranto, and acquired by the Museum in 1884.

(3) Langlotz, *Würzburg*, pl. 9, 111: good example in the black-polychrome style, with triangles around the base. Pl. 9, 82: a smaller linear example, for some not very apparent reason called PC by Langlotz, while 111 is called Corinthian.

(4) *Clara Rhodos* III, Ialysos, gr. 33, 24: with triangles around the base; the rest covered black glaze, with incised tongues or verticals on the shoulder. Found in an EC/MC context, which is its sole interest.

Note : (i) The linear ex. *Corinth VII*, i, pl. 22, 147, with dot-and-band decoration, appears to be dated too early by Weinberg. It is Corinthian rather than Protocorinthian. The convex side of the body seems generally to be a characteristic of the Corinthian period (contrast the PC example, *ibid.*, pl. 8, 133). So too *ibid.*, pl. 22, 146 need not be earlier than the Corinthian period. Neither can be called ' sub-geometric '.

(ii) A feature of the pottery from the Heraion at Foco del Sele near Paestum (*NS* 1937, 323 ff.), which, with the exception of one alabastron (*op. cit.*, 326), appears to be MC or later, is the large number of linear conical oinochoai and fragments of this shape. Most of them are small, but certain fragments, necks and handles, are from very large vases, much larger than any other known Corinthian examples, though very large PC examples occur (cf. *NC.*, 13). A handle fragment 24 cms. long and 3·7 cms. wide suggests a complete vase 37–40 cms. high. All the examples found seem to have linear decoration. They may well be local imitations produced to supply a peculiar local taste; *cf.* the kotylai at the sanctuary of Persephone at Epizephyrian Locri; Dunbabin, *The Western Greeks*, 262–3.. They are certainly not paralleled in Perachora at the same period, though, interestingly enough, terracottas from the Italian site are identical with those of one class found at Perachora (*Perachora* I, 191).

(iii) The jug, *Ann.* X–XII, 220, fig. 247, is an interesting halfway stage between a conical oinochoe and a broad-bottomed oinochoe. It has a short neck, and a trefoil mouth and lid. There are the usual triangles around the base; the rest of the body is covered with glaze, with incised tongues around the neck. It appears to be Corinthian, and was found in a seventh century context.

Add to Payne's catalogue the following references:

Payne, *NC.*, no. 755 is published in *CVA Oxford* II, pl. 5, 7, and no. 756 in *CVA Rodi* I, pl. 2, 1.

OLPAI

See *NC.*, 272 (LPC), 277 (Transitional; it is a shape extensively used in this period), 299 (EC, where the shape is discussed), 315 (MC; tall, slender shape). Evidence for the existence of the shape at a period earlier than LPC appears to be inadequate, since the fine olpe from Veii with lion and bull in incised-on-black technique, *NS* 1930, pl. 2 r., first called MPC by Payne (*NC.*, 342), as a late work of the painter of the B.M. kotyle with coursing hounds, was later redated by him to the LPC period, and therefore just after mid-century. The fragment *Corinth VII*, i, pl. 18, 132 is called an olpe fragment by Weinberg and dated to the end of the eighth century like the rest of the well-group (nos. 116–34) from the Corinthian Agora with which it was found, but all the pottery in the group need not be as early as this (131, for instance, seems much later), and the deposit is probably mixed. This olpe fragment may well be of the late seventh century. *Ibid.*, pl. 23, 167 also looks like a small and rather rough example of the shape, or intermediate between a common type of tall round-mouthed jug and the olpe. It is, however, from a well-group in the Agora dated to the third quarter of the seventh century, and therefore not necessarily earlier than examples previously known.

Add to Payne's list the following:

(1) *AA* XLVIII (1933), 276 and fig. 12: fragmentary, from the Athenian Kerameikos. White dot-rosettes on rotelles and neck; incised polychrome tongues and scales with double outline on the upper third of the vase; two friezes of animals, with sparing incision of detail; filling of dot rosettes and zig-zags. Between the friezes and the short rays around the base is a broad black band overlaid with two groups of narrow red and white bands and a frieze of white dot-rosettes. The scales are of the Corinthian type, and the drawing of the animals is of a somewhat rough Transitional type. It is certainly later than the two new LPC examples from Corinth: (1) *Corinth VII*, i, pl. 30, 218: fragments with remains of at least three friezes of animals in a very fine delicate LPC style, found in the ' EC ' well-group, and (2) *ibid.*, pls. 20–1, 142: fragmentary, with incised tongues on the upper portion of the body, three friezes of animals divided by broad bands, and short rays. The shape is not greatly different from the Athenian Kerameikos example, but the style is neater and more delicate, and there is a greater variety in the filling ornament (dot rosettes, chevrons, spiral-hooks and double lozenges). It was found in a well with earlier PC pottery. Given by Robertson (*BSA* XLIII, 45) to the painter of *NC.*, nos. 14–18, 25–7 (' Head-in-Air Painter ').

It may be noted here that *CVA Hague* II, pl. 7, 3–4 (inv. 2045 and 2046), not in Payne's catalogue, are LPC rather than Transitional. Other LPC olpai and fragments to be added to Payne's list are: *JHS* 1940, pl. 4, *k*, *m*; *l*; *n*, *o*, *p*, from Al Mina; *AA* 1930, 322, fig. 7 r. (*NS* 1930, pls. 2–3 and *PV*, pl. 26, 1, 5) and *AA* 1930, 321, fig. 7 l. (*NS* 1930, 58 and pl. 2 l.), from Veii.

(2) *AA* XLIX (1934), 205, fig. 5. Transitional fragment from the Athenian Kerameikos. Compared by Kübler with *NC.*, pl. 13, 5.

(3) Vatican, *Raccolta Guglielmi*, pl. 1, 2. Replica of *NC.*, no. 178 (Albizzati, pl. 6, 178). Another in the Torlonia Collection, Rome.

(4) *CVA Rodi* I, pl. 1, 2 (inv. 12211). With four friezes, of neat Transitional style, with dot-and-circle filling. From Kamiros, Makri Langoni, gr. 12; *Clara Rhodos* IV, 77, figs. 56 and 59. Found with b.f. pottery of the end of the sixth century; almost certainly two burials rather than a case of survival.

(5) Toronto, RHI, pl. 14, 194 (C 246). Olpe with rotelles and a moulding at the junction of neck and body; four friezes divided by black-polychrome bands; short rays around the base. It is certainly Corinthian, not Italo-Corinthian, but seems to have been repainted. In the friezes: sphinxes, lions, panthers, stag, bull, boar, goat, etc., with sparse dot-and-circle filling. Rather rough style Transitional, as far as can be judged.

(6) *Corinth VII*, i, pl. 30, 219: restored in plaster; black glaze on neck; on body: three friezes divided by polychrome bands; broad band with polychrome enhancement; short rays. The animals of the frieze vary in carefulness of rendering. Filling of incised rosettes and blobs. Note the sectional rendering of the panther's neck. Shape and style indicate a

date about 600 B.C. From the ' EC ' well-group. The fragment, *ibid.*, pl. 30, 220, with parts of two friezes, appears to be not far from the style of the ' Scale-pattern ' Group.

(7) *Albania* 1932, 11, no. 4, fig. 6: of MC shape, with heavy rim and narrow neck. Three friezes in a crude late MC style. Amyx, 232, n. 127, regards it as by the same hand as *NC.*, no. 908 (pl. 29, 6 and 8). It would, however, appear closer to *NC.*, no. 898 (pl. 29, 7; Amyx's ' Ampersand Painter '). A narrow-bottomed and a broad-bottomed oinochoe by the same hand come from the same burial on the site of Apollonia in Illyria.

(8) *CVA Providence*, pl. 6, 3 (C 2336): of tall, slender MC type (Amyx, 231, n. 114 calls the style EC); reddish-buff clay. Four friezes of animals, with at least one human figure; rays around the base. One panther (with three legs only) appears in an attitude a little more lively than usual, otherwise there is nothing striking about the style, which is fairly neat, with thick filling. Ascribed by Amyx, 231, n. 114, to the painter of the Amsterdam oinochoe, *Gids* pl. 56, 1285 (inv. 1860), *i.e.*, *CVA Hague* I, pl. 3, 1. There is no reason for Luce to suggest that it may be Italo-Corinthian.

(9) The following apparently unpublished examples are worthy of mention: (i) Parma, Museo di Antichità, from a private collection: fine fragment of an LPC or Transitional ex., with goat and lioness; incised tongues on shoulder. (ii) Perugia, no. 103: with five friezes of animals, of rather rough Transitional style. (iii) Rome, Villa Giulia: tongues on shoulder; good style; small, carefully incised scales on body. From Satricum? (iv) *Ibid.* Fragmentary, with three friezes of animals, in neat but heavy Early Corinthian style. From Satricum? (v) *Ibid.* Large fragmentary olpe, of EC/MC style. From Cervetri. (vi) Taranto, Vaccarella, gr. 82, 9/12/26: with polychrome decoration and rough volute and palmette design incised on the upper portion. Doubtfully Corinthian.

(10) The olpe *Encyclopédie photographique de l'art* (*Musée du Louvre*), II, 267 may be *NC.*, no. 765 (Louvre E 438). See Amyx, 231, n. 114.

Add to Payne's catalogue the following references:

(1) *CVA Louvre* VIII, pl. 24, 5–9: *NC.*, no. 184.

(2) *CVA Oxford* II, pl. 5, 13 and 20 and pl. 6, 9 and 13: *NC.*, no. 156.[129] *Ibid.*, pl. 5, 14 and 19: *NC.*, no. 1139. *Cf.* the long alabastron, *CVA Sèvres* I, pl. 14, 2.

(3) *CVA Madrid*, pl. 4, 7 *a–c*, and pl. 5, 1–3: *NC.*, no. 767.

Two other related shapes may be mentioned here. They are (1) the squat olpe (see *NC.*, 272 (LPC) and 315 (MC)), obviously East Greek in origin, and rare in Corinthian (to Payne's examples add a fragment in Parma, Museo di Antichità, with a stag, and filling of dot rosettes, of LPC or Transitional style) and (2) the olpe with trefoil mouth (see Payne, *NC.*, 326), which does not appear before the LC I period. New examples of this shape are:

(i) *AJA* 1934, 529–30 and pl. 34 A–B, in shape and decoration like the Louvre examples *NC.*, nos. 1407 A and 1412. Running spearman between two sphinxes in the panel. Apparently LC I, though it is difficult to tell, since the surface of the pot has been ruined by ' cleaning ', and it is no longer possible to say whether it belongs to the red-ground style; and (ii) Manchester III C 56, Webster, ' Greek Vases in the Manchester Museum ', *Manchester Memoirs*, LXXVII (1933), pl. 2, 1; with red slip; subject as *NC.*, nos. 1407, 1407 A.

Add to Payne's catalogue the following reference:

Payne, *NC.*, no. 1406 is now published in *CVA Louvre* VI, pl. 7, 9–11.

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[129] Also in Payne, *PV*, pl. 31, 3–4 and Buschor, *Griechische Vasen* (1940), 33, fig. 39.

AMPHORAE

On the 'neck-amphora' type, see *NC.*, 300, nos. 769 ff. (fig. 137). *NC.*, pl. 23, 5 is an example with a more cylindrical neck. The shape first appears in the EC period. There are Corinthian Geometric amphorae with a more or less continuous profile (cf. *Corinth VII*, i, pl. 6, 35 and pl. 10, 58), but no neck-amphorae properly so called have been found hitherto. Contrast the prevalence of the shape in Geometric and early Attic. For the same shape in the MC period, see *NC.*, 316, nos. 1142 ff. Later is the type with a continuous curve from the neck to the body (*NC.*, pl. 35, 3; MC); see *NC.*, 316, no. 1154, and the note there. It was common in the LC I red-ground period (*NC.*, 326, nos. 1415 ff.), when a more elaborate type of the neck-amphora was also introduced (*NC.*, pl. 40, 1 and nos. 1435 ff.).

Add to Payne's list the following:

(1) *CVA Louvre* VIII, pl. 23, 14–15 (A 424): neck-amphora with two friezes of animals. Fairly heavy MC style with thick filling.

(2) *CVA Poland* II (Coll. de l'Univ.), pl. 5, 5, inv. 104 (former 1054). Small ex., rather rough and slightly lopsided; smallish mouth, neck and handles in proportion to the heavy body; the base resembles that of late kotylai, with heavy angular foot. Incised double verticals on the shoulder; one frieze of crude animals of doubtful identity. Filling of incised blobs and dots. Below, broad band and rays. Late MC. Cf. *NC.*, no. 1306.

(3) *AJA* XXXIV (1930), 419, fig. 13 and *Art and Archaeology*, April, 1931, 224, figs. Amphora with a curious mouth resembling in shape a concave pyxis knob surmounting a torus moulding (or it may be a lid or stopper; it is difficult to tell from the photograph). The neck is more or less continuous with the body. Vertical wavy lines on the neck; continuous frieze around the upper part of the body with (A) cocks on either side of a double palmette; (B) quadruple lotus complex. Rosette filling. Heavy style. Below, a broad band overlaid with narrow red and white bands; rays. MC. Amyx, 217, suggests that it may be by the same hand as *NC.*, no. 887.

(4) Dugas, *Délos* XVII: eight fragmentary examples from Rheneia, with slight variations of shape. 126 might be the earliest, then 127, 124, 123 and 125; but there is nothing much to go on. Pl. 59, 121: mouth, neck and portion of shoulder only preserved. Echinus mouth surmounted by rounded moulding; concave neck; flat handles. The mouth, neck and upper part of the handles are covered with black glaze. Shoulder reserved, with dot-and-band (broad red bands) at the shoulder angle, and a row of dots under the edge of the neck glaze. The shape of the mouth is unusual. Pl. 59, 122: heavy almost spherical body. Cylindrical neck with central flange; heavy grooved rim of rectangular section; rounded handles; flat moulding at the junction of neck and body. The mouth and neck are glazed black. Incised verticals on the shoulder; moulding red; the body black with some polychrome bands. Short rays around the base. Pl. 59, 123: shape as *NC.*, 300, fig. 137. Broad flat handles. Black glaze on mouth, neck and handles. Short incised verticals on the shoulder; two friezes of silhouette animals with dot and cross filling, between two broad bands; rays around the base. See p. 191 for the silhouette style. Pl. 59, 124: shape and subsidiary decoration as in 123. Two friezes of silhouette animals with cross filling. See p. 191 for the silhouette style. Pl. 59, 125: shape (rim lost) and subsidiary decoration as 123. Two friezes of silhouette animals. See p. 191 for the silhouette style. Pl. 59, 126: shape of the body as *NC.*, 300, fig. 137, but the neck is more cylindrical and with a flange. Shoulder less flat than in 123–5. Flat handles. Incised verticals on the shoulder. One broad frieze, with remains of lion and bull. Limited filling. Probably heavy type EC. Broad band below frieze, and rays. Pl. 60, 127: shape of the body more elongated than *NC.*, 300,

fig. 137. Only a small portion of the rim and neck are preserved. The broad strap handles join the underside of the rim. The shoulder frieze is divided by a broad band from the main frieze. Animals (lion, bull, etc.) in both. Filling of incised rosettes and blobs. May be EC. Pl. 60, 128: shape as *NC.*, 326, fig. 171, but a little wider in the body. The rim is concave and spreads out further at the top than at the bottom. The whole is covered with black glaze (with a broad red band on the lower portion of the body) except for a reserved panel with a dot-pattern on that portion of it which lies on the neck. Only slight traces remain of the panel decoration. Dugas does not say whether there is a red ground or not.

(5) *AJA* 1934, 523 ff., Dohan, 'Unpublished Vases in the University Museum, Philadelphia', 526–7 and pl. 33, A–B (L 2940): continuous profile amphora with panel (usual dot-pattern at the top) containing (A) Bearded male head to l.; (B) Horse-protome, with one foreleg. Double rays around the base. *Cf.* for the shape the example in Heidelberg (*NC.*, 316, no. 1154, n. 2, and pl. 35, 3), but the neck is shorter and the lower part of the body broader. MC, as Dohan says, and not far from the Chimaera Painter's Group.

(6) *NS* 1936, 183–4, fig. 95, 1: small continuous-profile ex., found at Taranto, Vaccarella, gr. 91. Found with Attic b.f. cups. The glaze is very worn; the text does not state whether it is of the red-ground type or not. If Corinthian, it is LC I. *Ibid.*, 132–4: another small amphora (the decoration of which cannot be made out) found at Taranto, Vaccarella, gr. 43, in a late MC/LC context.

(7) Baltimore, Walters Art Gallery, *Journal of the Walters Art Gallery* VI (1943), 105 ff. EC amphora with five friezes (on loan from Mr. R. Garrett). Ascribed by Dorothy K. Hill to the painter of *NC.*, no. 770.

(8) Amsterdam, *Gids*, pl. 58, nos. 1297 and 1298. Type B amphorae. Shape as *NC.*, fig. 171, but the foot is larger with a more curved profile; 1298 is perhaps more slender than *NC.*, fig. 171. They may, however, be a pair. The catalogue description is very brief, and does not say whether there are panels on both sides. As far as can be made out from the illustrations the amphorae are all black, except for a reserved panel on the upper part of the body (red ground?) and a reserved band above the base with thin double rays. In the panels: 1297: net pattern at the top of the panel; rider with spear on galloping horse to r.; running hound under the horse; eagle in flight behind the rider; one incised rosette. Rider, hound and eagle black with red enhancement; horse white, with black mane, outline and inner details. LC I style common on such amphorae and on jugs. 1298: net pattern at the top of the panel; wrestlers at grips over a tripod of rather squat shape with ring handles. Figures black, with red enhancement on the faces (?). The figures, as far as can be judged from the rather poor photograph, have a somewhat archaic appearance (narrow waist, big thighs), but the rendering of the shoulder seems fairly advanced. LC I?

(9) There are a number of unpublished amphorae in the Museum at Taranto: (i) Santa Lucia, 8/11/24. On shoulder, chain of lotus flowers and buds; in the main frieze below, boar, lions, horseman. Fairly late MC style, though boars do not usually appear so late. The clay is brown, but the pot appears to be Corinthian. It was found in a tomb with a large assortment of other objects, including Attic b.f., all belonging to the period 550 B.C. or later. (ii) Corti Vecchie, 2/5/27. Red-ground continuous curve amphora. In panels: (A) black horseman galloping on a white horse; (B) black and white cock. Found with LC II pyxis with upright handles. (iii) Vaccarella, Via Messapia, 11/1/28. Red-ground neck amphora of metallic shape. (A and B) cocks on either side of lotus and palmette. Fair style. Found with two convex pyxides, one by, and one near the Dodwell Painter. (iv) Madre Grazia, 27/7/20. Red-ground panel amphora. In panels: (A) siren (closed wings) and cock; rosettes; (B) two confronted female heads. LC I. Found with Attic 'C' cup. (v) There are two others, of which the date and place of finding are unknown. The one has incised verticals on the shoulder, and crude animal frieze; the other two friezes of animals, of lateish MC style.

(10) Another unpublished example: LC amphora from a grave at Monasteri, Perachora. See *JHS* 1936, 145.

Republished: *NC.*, no. 775 A, in *AJA* 1934, pl. 32, and in Dohan, *Philadelphia*, pl. 54, 10. Neugebauer, *Führer*, pl. 13 r., illustrates *NC.*, no. 1431.

AMPHORISKOI

See *NC.*, 314 (MC) and 324 (LC I). Most of the examples with animal frieze are of quite inferior style. For two variant shapes, cf. *CVA Hague* I, pl. 2, 1 and 2 (which, according to Payne, may be later than LC I).

Add to Payne's list the following:

(1) *CVA Cambridge* I, pl. 5, 19 (B 23): of MC style superior to most.

(2) *CVA Oxford* II, pl. 4, 5 and pl. 4, 8 (1885. 626 and 1885. 625): two examples of the usual type with MC animal frieze.

(3) *CVA Hague* II, pl. 7, 6 (inv. 3534): poor style, with two friezes of late MC style.

(4) *CVA Univ. of California* I, pl. 6, 3 (8/3445): usual shape and subsidiary decoration, with floral.

(5) Langlotz, *Würzburg*, pl. 9, 117: usual MC type, with two friezes of silhouette animals.

(6) *NS* 1936, 119, and 132–4, MC from Taranto, gr. 14 and 43.

(7) *NS* 1937, 323 f. From the Heraion at Foco del Sele.

(8) *CVA Rodi* II, pl. 8, 4 (inv. 10494): very neat 'White Style' example. The mouth is broader and shallower than usual, and the foot broader. Relief ring at the junction of neck and body. From Ialysos, gr. 195; *Clara Rhodos* IV, 166, fig. 158.

(9) *Clara Rhodos* III, Ialysos, gr. 90, fig. 118, 2 (decorated with dot-and-band); gr. 5, 12 (with MC animal frieze).

(10) *Clara Rhodos* IV, Makri Langoni, gr. 178, fig. 349: a group of five amphoriskoi in an EC–LC I context.

(11) *Clara Rhodos* VIII, Annuachia, gr. 8, fig. 40: usual type with two friezes of geese.

(12) *CVA Taranto* II, pl. 2, 3: usual type with two friezes of animals of inferior MC style. There are also two examples in Taranto with dolphins, both late MC.

(13) *Corinth VII*, i, pl. 42, 335–6: petals on shoulder; one frieze of crude animals; narrow bands at intervals below. Style of *NC.*, pl. 29, 7. From the MC well-group.

(14) Boston, Fairbanks, pl. 45, 474 (inv. 76.32 (75)). Usual shape, with two friezes; not far in style from *NC.*, pl. 29, 1. Amyx, 232, n. 129, calls it close to his 'Ampersand Painter', adding to this group *CVA Brussels* I, pl. 3, 3; Brants, *Leiden*, pl. 12, 3; Mingazzini, *Coll. Castellani*, pl. 29, 13; *Délos* X, pl. 34, 472. MC.

Here may be mentioned the composite vase, *BCH* LXI (1937), 355–6, figs. 3–4, with attached amphoriskoi. A horizontal cylinder (tree trunk?) on four short supports is surmounted by a fragmentary amphoriskos(?), apparently the middle one of three communicating with the interior of the cylinder, and only in contact with each other. The lower part of the cylinder is covered with black glaze, as is the amphoriskos, except the lower portion which has 'tongues'. On the ends of the cylinder is a whirligig of crescents in black with incised outline. There are rosettes in white and a double incised line on the shoulder of the amphoriskos. Called Corinthian by Karouzou. Date uncertain.

HYDRIAE

See *NC.*, 278 (Transitional); 316 (MC); 327 (LC I; two shapes, figs. 172 and 173). Some of Payne's examples are important vases of the late polychrome figure style (cf. *NC.*, pl. 43, 1) with elaborate decoration. Other simpler types occur with the ordinary style of animal frieze, as will be seen from Payne's catalogue and the examples quoted below. It is to a great degree in connection with these that the difficulty arises of distinguishing fragments of hydriae from those of amphorae.

Add to Payne's list the following:

(1) *CVA Univ. of California* I, pl. 6, 2 (8/3300). Rim and neck black, with white dot-rosettes on the neck. Three friezes divided by bands; band and rays around the base. Smith rightly calls it MC, and points out that it stands close to the olpe *NC.*, no. 1134 (*CVA Copenhagen* II, pl. 88, 1). The style is a continuation of that of the alabastron-amphora *NC.*, no. 473 (Munich, *SH.*, pl. 8, 249).

(2) *BullMetrMus*, 1939, 99. Acc. no. 38.11.8. Ht. 7⅞ in. (20 cms.); it is therefore really a miniature hydria. The body is as *NC.*, 327, fig. 172, but the neck has only one slight moulded ring about two thirds up; the neck splays out slightly to the mouth, which has a rectangular profile. The handles, set low, are rounded, not as *NC.*, fig. 172. The pot is covered with black glaze, except the edge of the foot, a narrow band on the lower part of the body, and a panel on one side from the neck to handle level; on the upper edge of the panel are outlined tongues in groups. In the panel, human figure with sword, baldrick and sheath, in 'Knielauf' to r., about to slay a centaur (to l.; the centaur has a human figure with appended horse body) whom he has seized by the hair. The centaur touches the attacker's beard. On the l., seated sphinx to r. In the field, eagle and rosette filling (one dot-and-circle, the rest incised, some with double centres). Neat slender style, with careful incision. Late MC. The ground is not red. The black portions of the vase are enlivened with red bands.

(3) Dugas, *Délos* XVII: ten examples, all fragmentary. As far as dating by shape and style is concerned it does not appear that much can be extracted from the surprising number of examples of this shape found on Rheneia. As in the case of most of the neck-amphorae, there seems to be a close association in style with the narrow-footed jug shape. In shape, some seem to have the shoulder more rounded than others, but this does not appear to indicate earlier date. Possibly the narrower taller examples are later, since the hydriae decorated in inferior 'White Style' are of this shape. Pl. 60, 129 and 130, if Corinthian, would appear to be LC II. Pl. 60, 129 is a very obvious metallic shape, though the expression 'metallic' should be used with caution; cf. *AJA* LI (1947), 248 ff.

Pl. 60, 131, 132, 133 and pl. 61, 134: all with linear decoration. Ovoid body; concave neck; flat vertical and horizontal handles. The shape is close to that of the jugs with narrow foot. Mouth, neck and handles covered with black glaze. Bands and dot-and-band on shoulder; broad band on lower portion of body; rays. The rest of the body is reserved.

Pl. 61, 138: heavy rim (concave on the underside), with a slight moulding where it joins the neck. Concave neck, with slight moulded ring at the junction of neck and body. Very broad ovoid body. The animal frieze of the shoulder is divided by dot-and-band from the main frieze, in which are remains of a horseman and bull. Broad band and rays below. Quite neat style, resembling that of warrior aryballoi. Perhaps EC.

Pl. 61, 139: rim with hollow underside; concave neck, with slight moulded ring at the junction of neck and body; broad ovoid body. Rim and neck covered black glaze, with white dot-rosettes on the neck. Animal frieze on the shoulder (with bull, panther (?), owl and filling of incised rosettes and blobs); below, two narrow bands, horizontal zig-zag in the handle band, broad band and rays. Probably EC.

Pl. 61, 137: the greater part restored in plaster. Rim and neck as in 139, covered with black glaze. Ovoid body. Remains of EC/MC animal frieze on the shoulder; the rest covered black glaze, except for a reserved band; rays around the base.

Pl. 61, 135: rim and neck as in 139, but broader in proportion to the body. Ovoid body. Rim, neck and handle covered with black glaze. On shoulder, incised verticals and broad band. One frieze, with heavy MC style animals, as far as can be judged from the scanty remains. The lower portion of the body, as far as preserved, is covered with black glaze.

Pl. 61, 136: mouth and neck not preserved. The body is decorated as 135. Rough 'blobby' style. MC.

Pl. 61, 140: mouth with rounded section; flat shoulder; rather broad ovoid body. The vase is covered with black glaze except for a reserved panel extending from the junction of neck and body to about two-thirds the distance down the body. In the panel, slender confronted sphinxes. No filling. LC I.

LEKYTHOI

See *NC.*, 324, and the variant shapes there illustrated. It is a LC I shape, probably taken over from Attic.

Add to Payne's list the following:

(1) *NS* 1936, 134, fig. 22. *Cf.* for the shape, *NC.*, fig. 167. No red slip. Siren between confronted sphinxes; scanty filling; slender forms with neat incision. LC I. From Taranto, Vaccarella, gr. 43, in a MC/LC I grave-group. Amyx, 210, n. 21 considers it a descendant of the ' Delicate Style '.

(2) Unpublished, from Taranto, Vaccarella, Via Nettuno, 7/3/34. In Taranto, Museo Nazionale. Shape as *NC.*, fig. 167. Covered with black glaze, except for a reserved panel. In the panel: confronted seated sphinxes with bird between; rosettes. LC I. Found with MC/LC pottery.

The place of manufacture of the following is obscure:

From Taranto, Vaccarella, Via Iapygia, 23/4/26. In Taranto, Museo Nazionale. Shape as *NC.*, fig. 167. Pale, very faintly pink clay. Outlined tongues on the shoulder (every third overlaid red), rough dot-and-band below. The rest of the vase is covered with black glaze, except for a reserved panel with light brown surface. In the panel: Boread running to r., between griffon-birds. Good careful incision. Abundant use of added red and white enhancement; elaborate incision of scales on the Boread's tunic. One dot-and-circle filling ornament. It is not Clazomenian or Chalcidian. It might be Attic, or a local imitation of Corinthian.

Add to Payne's catalogue the following reference:

CVA Oxford II, pl. 6, 5 (1928. 11): *NC.*, 1361.

BOTTLES

For a discussion of the shape, see *NC.*, 313, and Amyx, 226. Amyx adds some new examples to Payne's list. The shape with continuous profile may have been the earlier, *cf.* the Cretan orientalising bottles (the earliest known examples ?), *AA* XLVIII (1933), 305–6, fig. 17, row 1, 4 (early orientalising) and row 2, 1 (of a slender elongated form (with cable band and floral)). These are republished in *Hesperia* XIV, pl. 19, 1 and 3. Some examples with offset neck seem fairly late (*cf.* the San Simeon bottle and the two from the North Cemetery at Corinth mentioned below), but the continuous profile type also occurs at a fairly late date (*e.g.* at Perachora), as well as intermediate shapes. It cannot be said with certainty that the Lesbian bucchero bottle with offset neck (*Perachora* I, pl. 28, 8 and p. 96) is early, though it might be. Both types are probably contemporary.

Add to Payne's list *NC.*, nos. 1067–72, and p. 339 (on *MA* XXXII, pl. 87, 3) the following:

(1) Amyx, 226 and pl. 31 *a*. In the Hearst Collection. Flattened globular body and slightly concave cylindrical neck. Two friezes of animals of late MC or LC I style, with incised blobs. Style akin to the kotyle *CVA Oxford* II, pl. 2, 39 (1922. 210)?

(2–3) *AJA* 1930, 541, fig. 21, row 1, 3 and row 2, 4. Two fine examples with broad ovoid bodies and slightly tapering necks; both of unusual size. The larger example is decorated in the 'White Style', the other with linear patterns and worn animal frieze. Found with a group of vases (EC–LC I) beside grave 139 in the North Cemetery at Corinth.

The example *MA* XVII, fig. 155, from grave 476 at Gela (found with pointed aryballoi), with broad body, half offset neck and linear decoration might be local rather than Corinthian or Cretan ('creta bigia con superficie pallida'). The same doubt prevails concerning the example with linear decoration from the cave of Herakleitsa, Kavala (*PAE* 1938, 87, fig. 7, 1). The odd pot *Corinth VII*, i, pl. 43, 360, with the remains of a handle, belongs to the class of handmade burnished pottery.

The stopper has disappeared from most bottles. One type of stopper is illustrated by Payne, *NC.*, 314, fig. 156. That of the East Greek bottle from Megara Hyblaea (*NC.*, 313, n. 1) has a flattened conical top.

Add to Payne's catalogue the following reference:

NC., no. 1068 (*CVA Hague* I, pl. 4, 1): now also Amsterdam, *Gids*, pl. 55, no. 1281.

RING VASES

Johansen, *VS*, 27, deals with the origin of the shape, and Payne, *NC.*, 313, with its Corinthian form. Payne maintains that all Corinthian ring vases are circular in section, though those of the Protocorinthian period are rectangular, but in *NC.*, 340, he calls the rectangular-section ring vase in Boston, Fairbanks pl. 43, 420, Corinthian. The catalogue description of it shows clearly that it is Boeotian. The rectangular section of PC ring vases coupled with their larger size and conical foot indicates that the Corinthian ring vase is a new invention. It has nothing in common with the East Greek ring askos. There are, however, some ring vases with rectangular section among those usually ascribed to Boeotia which might well be Corinthian, and at least one with flattened sides rather than rectangular section, to serve as a link between the two types. Ure collects a considerable number of Corinthian examples of circular section in *Hesperia* XV (1946), 30–50, and in the same article treats those with rectangular section, which, for the most part, he ascribes to Boeotia, following the usual practice. The type with rectangular section is also discussed by Greifenhagen, *AA* LI (1936), 399. Two of Greifenhagen's 'Boeotian' group are ascribed to Corinth by Ure. The first is *Délos* XVII, pl. 56, 70 (with a somewhat different mouth from the other examples quoted by Greifenhagen). Ure describes its shape as 'almost rectangular' (*op. cit.*, 42, no. 47); it appears to be completely so. The style certainly seems much more Corinthian than the usual examples with rectangular section, though the clay ('brun clair') does not sound like the usual Corinthian. The other example is *CVA Hague* I, pl. 6, 9, which, as Greifenhagen points out, is very similar to Corinthian. Ure classes it among the Corinthian (*op. cit.*, 42, no. 46); it has flattened sides rather than rectangular section. The example in Langlotz, *Würzburg*, pl. 9, 121, decorated with bands of red and dot-and-band, with 'yellow–red clay' and 'brown glaze', may also be Corinthian. Langlotz compares, not very aptly, Munich, *SH.*, pl. 12, 324 a, which certainly has a non-Corinthian system of decoration. The example in Bonn, *AA* LI (1936), 397–8 (with 'grey–yellow' clay and 'dull brown' glaze) seems as if it could be Corinthian at first sight, but is marked as Boeotian by the roundel on the shoulder.

The ordinary Corinthian type of ring vase is much less common than aryballoi and alabastra (Ure lists some fifty-odd examples), but seems to have been used for the same purpose, *i.e.*, as a container of perfume. No great skill was lavished on the decoration of ring vases. A feature of their decoration is the outline female head, of very inferior style, and a sort of debased warrior aryballos style, usually with horsemen.

Besides the examples given in Ure's list, there are the following, of which no further detail is available:

Syracuse, from San Mauro.
Crotone 1786, from Petelia (?).
Palermo, from Selinus, grave 24.

See also Mingazzini, *Vasi Castellani*, 149–50, with a list containing several examples which are possibly Rhodian imitations, and pl. 29, 4. An Italian imitation is Dohan, *Philadelphia*, pl. 52, 13–14, from Vulci.

MASTOI

See *NC.*, 312, and the references to the shape given there. The mastos was apparently in use earlier in Attica than Payne thought (i.e., *c.* 550–40), if the object on the Sophilos sherd from Samos (*AM* LXII (1937), pl. 57, 1) is really a mastos. Karouzou thinks it was introduced into Attica by Sophilos.

To Payne's list add the following:

CVA Musée Rodin, pl. 7, 4–6 and 9 (503): clay greenish-yellow, with clear yellow surface. The handles are horizontal. In the frieze: person reclining at a feast, padded dancers, rider on an ass to r., more padded dancers, rider on an ass or horse to r., and two more figures (not padded?). Burlesque of the Return of Hephaistos? See *JdI* LII (1937), 214–15, and the whole article, by Brommer, on such scenes. The style is very crude, worse even than *NC.*, no. 1359. LC I.

KRATERS

For a discussion of the shape see *NC.*, 300–1 (EC); 316 ff. (MC); 328–30 (LC I); 330 (LC I, of 'Chalcidian' shape). Weinberg, *Corinth VII*, i, 56 mentions a fragment of a Late Geometric Attic column-krater (*Hesperia*, Suppl. II, 173, C 111, figs. 115 and 121; see Young's discussion there), which puts the origin of the shape with handle-plates back to the first quarter of the seventh century, or earlier, as far as Attic pottery is concerned. In connection with Payne's suggestion that the shape was adapted from the Geometric form with slanting band from the handle to the rim, Young says (*op. cit.*, 173): 'The Geometric form, however, is often very metallic in character; the Corinthian krater *AJA* XXXIV (1930), 411, fig. 5, shows decided metallic influence in its flaring foot and flat band handles, projected for some little distance beyond the join along the edge of the rim, the flat form of which is also metallic. Bronze kraters may well have had flat lug handles projecting from the rim and supported below by metal struts; these were adapted rather than copied by the potters for their vases. Our handle would then be a copy and not an adaptation '. This would appear to depend upon the existence of such bronze kraters, of which Young quotes no examples. In any case there is no continuous tradition of such a shape through Protocorinthian; the Corinthian krater is practically a new invention, which found its imitators in Attica (but cf. *AM* LXII (1937), 114, n. 3 for an Attic krater from Vari, regarded by Karouzou as older than the oldest known Corinthian). If Weinberg's dating is correct the krater *Corinth VII*, i, pl. 24, 180 represents the LPC stage of a series of kraters extending through the eighth century and the first three-quarters of the seventh, with horizontal or diagonal handles, but there are no Protocorinthian examples with handle-plates.

Add to Payne's list the following:

(1) *CVA Musée Rodin*, pl. 7, 1–2 (1056): column-krater of yellow clay, with reddish surface. Panel decoration, with three padded dancers. Neat MC style.

(2) *CVA Hague* II, pl. 8, 4 (inv. 2034): fragment with processing men and women. The three women share one himation. Illustrated also in *Amsterdam*, *Gids*, pl. 57, 1291 *a*. See *AM* LII (1928), 52–65, for a discussion of such a representation of women. Another fragment, *ibid.*, pl. 57, 1291 *b*, with three female heads to r., and a man and woman, the latter with veil, in a chariot (reins only preserved), representing a wedding procession (Peleus and Thetis?), belongs to a similar krater. LC I.

(3) *Ibid.*, pl. 8, 5 (inv. 2030): fragment; youthful rider with spear, galloping to r. MC.

(4) *Ibid.*, pl. 8, 7 (inv. 2029): handle-plate; siren with curved wing to left. Good style, late MC.

(5) *Ibid.*, pl. 8, 8 (inv. 2031): fragment of handle-plate, with part of a woman's head and the inscription ϐPATA. MC?

(6) *CVA Poland* I (Goluchow), pl. 7, 1 *a–d* (inv. 158). With handles rising slightly above the rim, and joined to it by a sort of clay ledge (*cf.* no. 15 below). On the upper surface of the rim is a frieze of animals; note the hippocamps and the way in which the felines raise a forepaw. Crouching sphinxes under the handles; on the body two friezes of animals. The finely drawn bulls are especially noteworthy. It would appear to be EC, uniting several styles.

(7) *CVA Univ. of California* I, pl. 7, 1 *a–e* (8/361). On the rim, scale-pattern, with alternate red and white dots (cf. *NC.*, no. 1169). On the handle-plates, hook maeander. Two friezes, below which a broad band and rays. In the upper (main) frieze: (A) warrior combat, and a warrior pursuing another fleeing to r.; (B) cavalcade of three horsemen, each with a led horse; the horsemen carry shields. The middle (incised) blazon is a common pattern on aryballoi; perhaps important for dating the pattern; see Amyx, 231, n. 108,

and p. 201 above; it resembles *NC.*, fig. 54 H, which cannot, therefore, be as late as Payne (*NC.*, 148) would date it. The second frieze contains animals. In the space under the handles, a siren with reverted head. In the main frieze the forms are relatively slender; note the long legs of the horses. There is no filling. In the animals of the frieze the lion type is a more slender form of the ' Scale-pattern ' lion, an obvious modification of *NC.*, pl. 20, 1–2. The panthers are a later and more elongated version of *NC.*, pl. 24, 6. The vase is important (1) for connecting animal frieze and ' figure ' style, and (2) as the meeting place of a developed stage of the ' heavy ' style, and a certain type of ' slender ' style. Smith says of it: ' Middle Corinthian, to be placed very near *NC.*, 1169. The pattern of the rims of these kraters is not enough to put them squarely in Payne's ' Scale-pattern ' group, but there is at least a connection; *cf.* our lion with his pl. 30, 9 '.

(8) Bonn, A. Greifenhagen, *AA* LI (1936), 343 ff., 13 (inv. 374.19), fig. 16. Fragment of a column-krater. Bearded man r., with spear. By the same hand, *NC.*, no. 1187, of MC period.

(9) *Ibid.*, 14 (inv. 1114.2), fig. 15. Fragment of a krater, from under the handle. From Selinus. Under the remnant of a handle appears Ajax, sitting (?) to r., with a spear across his shoulder; then Diomedes, standing to r., with a spear in the same position; slight traces of a third figure. The inscriptions are mentioned by Payne, *NC.*, 169, no. 74. Beginning of the sixth century?

(10) *Ibid.*, 15 (inv. 697.82), fig. 16. From Naucratis. Fragment with the lower part of Herakles (in short chiton) holding the body and head of a snake. Herakles and the Hydra? MC. Add this example to Amandry's list of representations of this Labour of Herakles in *Mon Piot* XL, 32.

(11) Boston, Fairbanks, pl. 49, 497 (inv. 13.96). Fragment of rim, neck and shoulder of krater with handle-plate and handle; the latter, to judge from the photograph, appears to assume a half-ring form. Rays on rim; on the handle-plate: seated ithyphallic man with one hand raised to his head; incised rosettes. ' Pale red ' clay; somewhat lustrous black glaze; added red. Payne (*NC.*, 340) calls the style EC.

(12) *Ibid.*, pl. 37; krater fragments from Naukratis: 341.1, with cock, EC?; 341.2, the best of the fragments, with part of a rank of warriors to r., with long-crested helmets, raised spears and shields; eagle in field; good style, fine careful incision; MC?; 341.3 and 4, rim fragment and handle-plate. *Ibid.*, 346.1 (goat), 346.4 (padded dancers of better style than usual on kraters) and 346.5 (panther), all MC?, seem also to be krater fragments.

(13) Toronto, RHI, pl. 16, 202 (C 311). From Santa Maria di Capua. The body narrows sharply to the heavy inverted-torus foot (as *NC.*, pl. 43, 2). The surface is covered with a ' light reddish-brown wash '. The interior is black, with a red band near the lip. Zig-zag lines on the upper surface of the lip. On the handle-plates (i) lotus-palmette, streamer and bud complex in white, with details in glaze. The rest of the rim, neck and handles are black. At the junction of neck and shoulder, neat outlined tongues, alternately overlaid red. In main frieze: (A) two bearded men, with spears, conversing; clad in long chiton and himation draped diagonally in the figure on the left, worn in shawl fashion by the other; these are flanked by youthful horsemen with spears. In the field, vertical branch, flying eagles and a bird like a swan but with long legs. One horse is white; plentiful red enhancement, including the mane of the black horse; the chitons are white with glaze interior lines and borders; the himatia are overlaid red; (B) three youthful horsemen walking to r. with spears; added red. The middle horse is white, with glaze inner details, and black mane overlaid red. Eagles in the field. The editors compare Munich, *SH.*, pl. 11, 344 = *NC.*, no. 1455. Under the handles (i) siren with spread wings; (ii) griffon-bird. No inscriptions. The above is divided by a narrow band from a secondary frieze of animals, four pairs of panthers and goats, and a swan (?). No filling. Cf. *NC.*, pl. 41, 4. The secondary frieze marks the krater as Late Corinthian, as do the abundant use of white and the slender type of horse (cf. *NC.*, pl. 41, 1) in A. Note that in B the horses are heavy; the leading horse might almost be Early Corinthian. The human figures in their advanced stage of drawing also indicate a late date. It belongs to Payne's group *NC.*, no. 1455–8, the painter of which Amyx, 228, n. 29, would call the Hippolytus Painter from *NC.*, no. 1456.

(14) *Clara Rhodos* VIII: the fragment Marmaro, gr. 22, 4 (found with other odds and ends in an ' area di cremazione ' of MC/LC period), with a sphinx and padded dancers, might belong to a krater.

(15) *Corinth VII*, i, 63 and pl. 32, 233. Variant shape, with wide mouth and body, and a foot much wider than usual. The handles project above the upper surface of the rim, and are joined to it by small ledges. It is covered with black glaze, with polychrome bands at intervals. From the ' EC ' well-group, and may therefore be dated *c.* 600 B.C. or a little later. For its development in the sixth and fifth centuries to a taller form, with taller neck and with handles set closer to the rim, cf. *Hesperia* VII (1938), 583, nos. 59–62 and VI (1937), 292, fig. 24, no. 146. A similar example but with animal frieze is *Art and Archaeology* XXIX (1930), 201, fig. 8, which is dated by Payne, *NC.*, 342, to the early MC period; he compares the ' freak ' shape of *NC.*, no. 1175. *Cf.* also the example in Poland, no. 6 above.

(16) *Ibid.*, 74–5, pls. 38–9, 312: column-krater. Lotus-palmette chain on the upper surface of the rim. In the main frieze, Herakles and Centaurs. In the lower frieze, animals and a padded dancer. No filling. Weinberg correctly dates the krater (which was an isolated find) to a little after 600 B.C., and gives a full discussion of its shape and decoration.

(17) *Ibid.*, 75–6, pl. 40, 313–19: sundry column-krater fragments, including five handle-plates. 316 is noteworthy, with a finely incised bull's head. Of the other fragments only 313 (with part of two horsemen, a flying eagle and a seated sphinx in the main frieze, and part of a frieze of animals below) is worthy of mention. Its style is neat; Weinberg compares *NC.*, pls. 33, 6 and pl. 34, 7.

(18) The krater in Torcello Museum (unpublished, but mentioned by Payne, *NC.*, 189) is of mediocre MC style with a main frieze: (A) combat of warriors on foot; (B) mounted warriors; and a frieze of animals below.

(19) The krater in the Gallatin Collection mentioned by Payne in *NC.*, 342 and in *CVA Oxford* II, on pl. 2, 1, is now published in *CVA Fogg Museum and Gallatin Collections*, pl. 34, *a–b*. The frieze between the handles contains padded dancers ranged around a krater, and men (padded?) playing leapfrog. Below are two friezes of heavy elongated animals. It is of early MC style, not so very far from the Scale-pattern Painter.

(20) *BSA* XXXIII, 58–9: krater fragments from Antissa in Lesbos. Rim fragments decorated with lotus-palmette, two handle-plates, and body fragments described as ' showing boys riding (white ground) '. Two or three kraters represented. Period: ' first quarter of the sixth century '.

(21) *BSA* XXXV, 162–3, and pl. 37, 34. From Kato Phana, Chios. Fragment of shoulder from below rim near handle. Clay reddish and micaceous; thin red wash. Outlined tongues on the shoulder with red (and white?) enhancement. In frieze, man to r. (not padded), woman to l., nude, and man to l. (padded?), all dancing; small portion of bird's or siren's wing. Remains of inscription. Related by Payne to the krater *NC.*, no. 1478 (group of *NC.*, no. 1431, the Andromeda Group). Doubtful. Certainly related to padded dancer krater fragments from Perachora (Limenia).

Add to Payne's catalogue the following references :

(1) *CVA Oxford* II, pl. 6, 20: *NC.*, no. 1190.

(2) *CVA Hague* II, pl. 8, 2–3 (inv. 2033 and 2032) and pl. 8, 6 (inv. 2090): *NC.*, no. 1188. *Ibid.*, pl. 8, 9: *NC.*, no. 1453 A; *ibid.*, pl. 8, 10: *NC.*, no. 1472 A.

(3) *CVA Madrid*, pl. 6, 2 *a–c*: *NC.*, no. 1482.

(4) Bonn, A. Greifenhagen, *AA* LI, no. 12, fig. 14: *NC.*, no. 1164.

(5) *Corinth VII*, i, pl. 26, 188: *NC.*, no. 776; *ibid.*, pl. 42, 334; *NC.*, no. 1177.

(6) Boston, Fairbanks, pl. 48, 496 (inv. 01.8040): *NC.*, no. 1462.

(7) Amsterdam, *Gids*, pl. 57, no. 1296 (*CVA Hague* II, pl. 8, 9): *NC.*, no. 1453 A. *Ibid.*, pl. 57, no. 1295 (*CVA Hague* II, pl. 8, 10): *NC.*, no. 1472 A.

(8) Mingazzini, *Coll. Castellani*, pl. 28, 1–4: *NC.*, no. 1156.

(9) Neugebauer, *Führer*, pl. 14: *NC.*, no. 1471.

(10) Buschor, *Griechische Vasen* (1940), 68, fig. 79: *NC.*, no. 1446.

(11) *Ibid.*, 69, fig. 80: *NC.*, no. 1477.

(12) *AM* 1938, 92–3, fig. 1 (a poor reproduction of Alinari 52754): *NC.*, no. 1197. Technau, *loc. cit.*, places it earlier than *NC.*, no. 1471, and relates it to *NC.*, no. 1187.

R. J. Hopper

NOTE

Since the above was written, several important publications have appeared which are concerned principally or incidentally with Corinthian b.f. pottery and its problems. Short observations on these works, which could not be conveniently incorporated in the text and notes above, are added here.

(i) T. J. Dunbabin's *The Western Greeks* (1948) contains a very great deal which touches on aspects of Corinthian pottery. Especially to be noted are: 43 n., the absence of pre-colonisation remains at Selinus; 259–63, Corinthian b.f. and local imitations in South Italy and Sicily; 280, the early oikoi at Selinus; 301–5, general on Selinus; 435–71, on the chronology of western sites and Protocorinthian, including especially Selinus (437–8 and 457) and the problem of the Perachora scarabs (464–5) which indirectly concerns the dating of Corinthian b.f. pottery. See also, *passim*, on Akragas and Kamarina.

(ii) Of more specialised interest is the publication in *Hesperia* XVII (1948), 197 ff., by S. Weinberg, of another important well-group from Corinth. Called Well-Group D and discovered between the back of the West Shops and the Museum, it is dated by Weinberg to the same period as the ‘ Early Corinthian ’ Well-Group found to the North of Temple E (published by Weinberg in *Corinth VII*, i, 60 ff., nos. 218–311). ‘ They give ’, says Weinberg, ‘ a rather complete picture of the average production of the Corinthian Kerameikos in the last quarter of the seventh century.’ Incidentally they also give some idea of foreign imports. Athens is already appearing as a source of pottery. This new well-group adds nothing to our knowledge of the chronology of Corinthian, but yields some interesting pots, of which the following are most important: D1, a rough late Transitional s.b. oinochoe, with an early double-lotus centre motif; D2, a similar jug with rather rough ‘ elongated ’ EC animal frieze; D4, s.b. oinochoe, curious for its decorative system, *viz.*, one wide band around the body, two narrow bands below, and neat dot-rosettes in the shoulder frieze; D6, black-glazed beak-spouted ovoid oinochoe, of which the shape seems unique; D7, a spherical jug with shallow offset neck and circular mouth, related to the example mentioned above in the text (under ‘ Globular Oinochoai ’) from the ‘ EC ’ well-group *Corinth VII*, i, pl. 32, 231; D11 and 12, jugs related in shape to the olpe type, one covered with black glaze, and the other with widely-spaced bands; D13, black-polychrome krater of the same type as *Corinth VII*, i, pl. 32, 233 (see ‘ Kraters ’ no. 15 above); the foot of the latter should be restored as that of D13 (so Weinberg). To the skyphoi with offset rim from the ‘ EC ’ well-group (see ‘ Cups, A. With offset rim and conical foot ’ above) may now be added the very varied selection from the new well-group, *viz.* D31–D39, none of which, however, shows signs of the conical foot of the more elaborate Corinthian cups with offset rim. Another well-group, C, affords an example, C11 (pl. LXXV), of the probable prototype in the late Geometric period (‘ third and early fourth quarter of the eighth century ’) of these skyphoi. D55 is a cup with continuous profile and ring foot; on exterior, band and rays; on interior, band and Typhon with curved wings to left; style hard to date. For the overall interior decoration, *cf.* the cup of similar shape in Bonn (‘ Cups B ’, no. 1 above). D60, black-polychrome one-handled mug; it may be, as Weinberg says, an imitation of the Attic examples such as D58–D59. In view of the rarity of the shape the following may be mentioned: *CVA Copenhagen* II, pl. 91, 1 (inv. ABC 1039), acquired in Greece; one-handled mug with offset rim; yellow-grey clay, grey-brown glaze; decorated with a series of birds and blobs, no incision. It is called Corinthian, but for its shape cf. *AJA* XLVI (1942), 41, fig. 28, a one-handled mug from Phaleron grave 16. 3 (last quarter of the seventh century). The Copenhagen example may belong to the ‘ Swan Group ’ of Attic. D63, concave-sided pyxis and lid with heavy knob; the style cannot be made out in the photograph, but Weinberg compares exx. of the Mykonos Group (for rosettes only?). The remainder of the vases and fragments are of no importance, except D14 and D15, two good-style medium alabastra with bounding lines above and below the frieze; EC, both by the same hand; note the use of red dots in the same fashion as the more usual white.

(iii) In *BSA* XLIII (1948), 1 ff. Professor M. Robertson publishes the Geometric and later finds from Aetos, Ithaka, which include a certain amount of Corinthian, for the most part of little importance in comparison with the Ithakan fabric from the same site. Note the following, all kotyle fragments: no. 33 (pl. 14), perhaps early Transitional rather than LPC; no. 34 (pl. 14), Transitional, with coarse heavy animal frieze; Robertson compares *NC.*, pl. 12, 8–10; no. 39 (pl. 14, and fig. 9), MC; Apollo (in chariot?) Musagetes and Muse with patterned dress. For the subject Robertson compares *F. de D.*, V, 144, fig. 590 (*NC.*, no. 958). No. 40 (pl. 14), kotyle with reserved band with linear pattern, between broad glaze bands, thin rays; Robertson relates it to *NC.*, nos. 970–1, connected in turn with the Samos Group; LC I. A dinos or krater fragment, no. 62 (fig. 15), shows a curious technique, which is LPC and Transitional, as Robertson points out; a bird (with polychrome enhancement?) is incised on the black glaze ground of the fragment; it is ascribed to the LPC period but is, perhaps, somewhat later. Oinochoe fragments: no. 148 (pl. 15 and fig. 26), remains of scale-pattern band, single frieze, with lion, running man, lion (head reverted), geese (?) with raised wing, rear body of lion; dot-rosettes; PC lion type, but rather heavy style between LPC and Transitional. Nos. 150 (fig. 27), 152 (pl. 11), 153 (pl. 11), 221 (pl. 11, olpe?), varying styles of mediocre Transitional animal frieze. No. 156 (fig. 28), fragments of good EC/MC style, which seem to have some details in common with the large group of Louvre E 565. Correct, in *op. cit.*, 40, the reference to the plates *NC.*, nos. 1054–55. These are connected by Payne with the aryballos no. 853, not with no. 835. The latter is the connecting link between the two groups. The same article contains very useful general comments on shapes, mainly PC but with some interest for Corinthian: cups and kotylai, 10–13, for the origin of the kotyle; kraters, 24–25; tall pyxides, 28–29; low pyxides, 29–30, '. . . the only type of pyxis that survives the Geometric period at Corinth '(?); broad-bottomed oinochoai, 40–43; tall-necked ditto, 43–45; round-mouthed ditto, 45–47. In his general comment, 53–59, Professor Robertson is concerned wholly with Protocorinthian.

(iv) Worthy of mention solely on account of the associated Attic is the pottery found in the Corinthian Agora (S.E. Building), in a well (' of the third quarter of the sixth century '), published in *Hesperia* XVI (1947), 233 ff., and pl. LV, 4, by Broneer (' Investigations at Corinth 1946/47 '). The associated Attic is inferior b.f. and black glaze-polychrome. The Corinthian is of very poor quality. Of that illustrated, the large kotyle is LC II; on the other hand the small kotylai are not, at first sight, greatly different in shape and style, if they can be said to have style, from ' EC ' well-group 254, 256, 257 (*Corinth VII*, i), or Well-Group D, D43 (*Hesperia* XVII, pl. LXXXI); closer inspection shows that they are not so tall as ' earlier ' exx., and have an angular footring. The medium-sized kotyle shows a curious rendering of the wing of the confronted sphinxes (apprentice work?).

Addendum to p. 182, note 96.

AA 1943, which contains (417–441) the evidence for Kübler's new dating, is now available. The evidence is provided by that very complex group of grave structures discovered by the German School at Athens in the Kerameikos area under Hagia Trias. It comprises ' einundzwanzig mitunter wohlerhaltene Grabhügel und Grabbauten über- und durcheinander ' (*AA* 1936, 184). The structures in question and the finds associated with them were briefly published in *AA* 1933, 262–287; 1934, 196–228; and 1936, 181–208, where the complexity of the structures, some overlying and cutting into others, is much emphasised. A study of these reports in connection with *AA* 1943, 417–441, is not easy, since the numbering of the grave structures (I–XVIII) in *AA* 1943 is at times difficult to link up with the groups set out in the excavation reports. The importance of these structures lies in the association in or near them of Protoattic with Protocorinthian and Corinthian pottery. Thus they seem to provide the means to a valuable chronological link-up. In the first publication in 1934, Kübler accepted the chronological scheme of Payne, and fitted the succession of structures and the Protoattic associated with them seemingly without difficulty into it. Cf. *AA* 1934, 199: ‘ Die zeitliche Abfolge der einzelnen Anlagen ist an ihrer Schichtung und gegenseitigen Störung klar abzulesen. Ihr Zeitansatz und damit die Datierung der frühattischen Beigaben, deren zeitliches Verhältnis untereinander durch die Schichtenfolge festliegt, ergibt sich aus den protokorinthischen, korinthischen und attisch-korinthisierenden Funden, deren Datierung nach den Untersuchungen Paynes als gesichert gilt ’. It should be observed that J. M. Cook used some of the material for his study of Protoattic (cf. *BSA* XXXV, 201–2), and discussed the relative dating of two of the structures (‘ Opferrinnen ’ 1 and 2, *ibid.*, 209–11). In this latter passage, if the present writer understands the argument correctly, Cook shows cause to query Kübler's relative order for these two structures, which, indeed, is based on purely ceramic evidence, since ‘ the excavations in themselves have given no indication of their date in relation to one another ’. This case serves to show that some of the evidence (and indeed a very important part) is not beyond debate.

It appears to the present writer that there is by no means a very clear succession of structures, each successive one superimposed upon or, in an unambiguous manner, cutting into the one below it. Indeed the connection, in some groupings, of ‘ Grabhügel ’, ‘ Opferrinne ’ and ‘ Brandgrab ’, as suggested by Kübler in *AA* 1934, 196–206 and especially in 203–6, seems very uncertain, and the same appears true, on occasions, of the positioning of the finds associated with them; cf. *e.g.* the position of the krater with lotus chain, *AA* 1933, 264–5. In particular, as Kübler himself seems to admit (*AA* 1933, 267, 270, 277; 1934, 219–20), the nature and connections of the ‘ Opferrinnen ’ are quite obscure. The site had been used down to the end of the sixth century, or at any rate to the second half of it (*AA* 1933, 262). Has sufficient allowance been made for the disturbance of earlier groups by later structures? In any case the Attic, Protocorinthian and Corinthian are not, for the most part, associated together in those structures which are clearly shown to be successive through their superimposition.

In view of these considerations, which *might* seem to cast doubt on the value of the evidence, it is all the more surprising to find Kübler, in *AA* 1943, suggesting a revision of Payne's chronology with the following arguments. (i) Some, at any rate, of these grave structures are of obvious importance. One, therefore, cannot have been erected on or disturbed another except after a considerable passage of time. ‘ Unter Aufwand errichtet standen diese Grabmäler Vornehmer sicher geraume Zeit in der Obhut der Familien der Toten und sind nicht sogleich unter anderen Erdmalen verschwunden ’ (*AA* 1943, 429–30). ‘ Man sieht, die Störung der älteren Anlagen durch jüngere wird lange vermieden, die Grabbauten, ebenfalls durch luftgehärteten Porosputz gesichert, sind alle in sich zusammengestürzt, bevor sie überdeckt werden ’ (*AA* 1943, 431–2). (ii) The succession of structures, when dated according to Payne's chronology, does not allow, in Kübler's opinion, sufficient time for the development of Protoattic and Early Attic Black Figure from the stylistic stage of the Kynosarges Amphora and its connections to the stage of the Deianeira Group (cf. *AA* 1943, 432). Kübler attempts to show this by a review of Attic vase painting of the period in question, on which indeed the present writer also feels that much work remains to be done to demonstrate the relations of Corinthian and Attic. Furthermore, at the end of his review of Attic vase painting from the krater with water-birds (*AA* 1943, 421, fig. 47) and the krater with lotus chain (*AA* 1933, 265, fig. 5, influenced by LPC and with traces of the Kynosarges style), both from structure XIII, to the deinos of the Deianeira Group (*AA* 1943, 425, figs. 52–4), from structure XV, Kübler maintains, *AA* 1943, 438–9: ‘ in den Anlagen XVI–XVIII nach Zerfall der Grabbauten XIV und XV auch nicht eines der zwischen XIII und XV geschaffenen Meisterwerke als Nachzügler mehr begegnet. Der Zerfall und die Überdeckung der Bauten und Hügel treten also erst nach einer langen Reihe von Jahren ein und die Abfolge XIII–XVII überspringt daher die grossartigste Phase der frühen attischen Malerei ’ (*AA* 1943, 438–9)—an argumentum ex absentia which leaves a great deal to be desired.

Thus it comes about that Kübler, in keeping with his view that Payne's chronology must be altered, first (*AA* 1943, 439) proposes to allow a generation (thirty years) between structure XI (620 B.C.), XIII (*c.* 590 B.C.), and XVI–XVIII (*c.* 560 B.C., or 550 B.C., allowing for the suggested considerable gap (see above) between XIII–XV and XVI–XVIII). However, the dating of a group (XVI) which contains ' Early Corinthian ' to 550 B.C. ' at the earliest ' seems to give Kübler pause, and he then modifies his interval periods to twenty years (*ibid.*, 439; ' Beschränken wir die Dauer der Erdmale auf 20 Jahre ') to give XI as *c.* 630 B.C. (observe that this fits in better with the stylistic dating of the Attic pottery from this structure, cf. *AA* 1943, 420, fig. 46), XIII *c.* 610 B.C. and XVI–XVIII 'frühestens' *c.* 580 B.C. This is elaborated to give (*ibid.*, 440) 650–625 B.C. for Late Protocorinthian, 625–610 B.C. for Transitional, and 610–580 B.C. for Early Corinthian. Middle Corinthian begins 580 B..C ' or a little later '. The chronology of Early Attic seems to be varied accordingly or even in excess of what might be expected from these dates for Corinthian. The krater with lotus chain of XIII and ' perhaps ' also the Piraeus amphora fall in the decade 620–610 B.C., and the celebrated amphora of the Nessos Painter after 600 B.C. The Gorgon Painter seems to be identified with Sophilos. The basic dating from which the rest are calculated is that of structure IV (*AA* 1943, 418, ' unmittelbar nach 650 '), which comprises ' Hügel ' III, ' Opferrinne ' 1 and ' Brandgrab ' d, more or less ' contemporary ' with III (' Opferrinne ' 2); *cf.* Cook, *BSA* XXXV, 209–10. As Cook points out (*ibid.*), ' about the middle of the century ' was also Kübler's former date for ' Opferrinne ' 2 (*AA* 1934, 203), but ' Opferrinne ' 1 was formerly dated ' well before the middle of the century ' (Cook), cf. *AA* 1933, 267 and 1934, 207. This variation obviously would make a good deal of difference in the subsequent chronology, and is inadequately explained in *AA* 1943. Kübler's earlier remarks on the contents of ' Opferrinne ' 1 would suggest the date of IV as *c.* 670/65 B.C., and thus XI as *c.* 650/45 B.C., XIII as *c.* 630/25 B.C., and XVI–XVIII as *c.* 600/595 B.C. Thus Kübler's calculations and Payne's chronology would seem to be reconciled. Cook, however, has shown reason for an earlier dating of ' Opferrinne ' 2 (*BSA* XXXV, 201), and that ' Opferrinne ' 1 is later than 2 (*ibid.*, 209–211), so the above suggestion cannot stand. In this manner, whether he agrees with Cook's dating or not (and in *AA* 1943 he appears to have accepted Cook's date for ' Opferrinne ' 1), Kübler's chronology seems to receive confirmation. In fact, however, the real objection to Kübler's argument lies not in the starting point of the chronology but in the basic principles on which his argument rests.

It is neither possible nor desirable to effect an elaborate review of the evidence in detail, nor does the present writer feel competent to discuss here the chronology and relations of Corinthian with Late Protoattic and Early Attic Black Figure. The criticisms of basic principle, however, may be set out thus. (i) If it be argued that the grave structures had to fall into disrepair or be forgotten (excluding, one supposes, the possibility of political reversals bringing about the desecration of grave monuments) before newer structures could be erected upon them or cut into them, then surely, accepting the description of some of them as ' stattliche Anlagen ' (*AA* 1943, 418) and ' Grabmäler Vornehmer ' (*ibid.*, 430), a generation is not sufficient to produce this effect, to say nothing of twenty years, and once this short period is admitted an even shorter one is not excluded. (ii) It might be argued that the time required for the Protoattic-Early Attic development between XIII and XV seems to discredit Payne's chronology and lend verisimilitude to the suggestion in (i). Kübler argues (*AA* 1943, 432) that Payne's chronology allows only five years for the development of style between the stage of Protoattic represented by the lotus chain krater (*AA* 1933, 265, fig. 5) in XIII with the ' Transitional ' jug, kotyle and pyxis sherd (*AA* 1933, 276, fig. 12; 1943, 421, figs. 48 and 49) and the stage of Early Attic Black Figure represented by the deinos of the Deianeira Group (*AA* 1943, 425–8, figs. 52–4) in XV with the ' Early Corinthian ' kotyle and jug fragments (*AA* 1943, 428, fig. 55 and 429, fig. 56). It is obvious, on examination of the evidence, that Kübler has taken the latest possible date for the Transitional in XIII, *i.e.* 630 B.C., and the earliest possible date for the Corinthian in XV, *i.e.* 625 B.C., to obtain this period of five years. Whatever opinion is held of the date of the olpe in XIII, the jug fragments in XV seem far from being the earliest of Early Corinthian, if indeed they can be dated at all. (iii) In all this argument by Kübler, Payne's chronology is prejudiced by Kübler's tendency to give some Corinthian too early a description; thus the jug fragments *AA* 1943, 428, fig. 55, and the kotyle *ibid.*, fig. 56, described as ' frühkorinthisch ', should be called Middle Corinthian; the kotyle *ibid.*, 430, fig. 57 may well belong to the second decade of the sixth century as Kübler says (more probably it is of the first decade), but it is not ' frühkorinthisch '; the concave-sided pyxis *AA* 1934, 203, fig. 4 is later than ' the beginning of Middle Corinthian '. There is also a confusion, as so often seems to happen in such arguments on chronology, between the idea of contemporaneity of deposit in the grave group with that of contemporaneity of manufacture. In any case the Transitional and Corinthian involved is of too inferior a quality and too limited in amount to allow any deductions to be drawn from it which are at variance with those of Payne. Here the present writer would like to modify his opinion expressed on page 170 above. (iv) As was pointed out previously, these Kerameikos finds were earlier taken to confirm Payne's chronology, or rather Payne's dates were accepted as the standard for the dating of the Protoattic. Any change, on the basis of the Kerameikos excavations, seems unnecessary. It is to be noted that nowhere in his exposition of the new chronology does Kübler take into consideration its repercussions on the question of Selinus, nor does he consider the difficulties arising from the extension of the period of Late Corinthian into the second half of the sixth century.

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SOUTH-EASTERN ELEMENTS IN THE PREHISTORIC CIVILIZATION OF SERBIA[*]

Under the same title M. M. Vasić published an article forty years ago, which was then the first step towards a systematic study of the connections between the Aegean area and the Serbian and North Balkan spheres.[1] M. Vasić's article was the first result of the first systematic researches at Vinča, the most important site of the Northern Balkans. From this time on many excavations have been made at Vinča and other prehistoric sites, and the material has piled up too rapidly for scientific evaluation to cope with.[2] As the past forty years, ending with World War II and the subsequent events in Yugoslavia, must no doubt be reckoned an entire phase in the history of this study, it seems appropriate now to attempt to give a summary of the results so far gained.

Before coming to our real topic, it will be necessary to clear up the question of relative chronology. The permanent basis of this has always been M. Vasić's illuminating and important excavations at Vinča, although an exhaustive summary has not yet been completed. The four volumes of the large-scale Vinča publication and numerous articles,[3] and also the use of the material in the Vinča Museum and the National Museum (Beograd), permit one, however, to draw a clear chronological picture. The results from all other excavations fit into this picture without difficulty. The section, which is more than 10·5 m. deep, makes it easy to develop a relative chronology, though the use of the Vinča publication is impaired by various difficulties, mainly caused by the over-schematic method of digging and publishing.

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[1] M. Vasić, *BSA* XIV (1907–8), 318 ff.

[2] V. Fewkes, *BASPR* XII (1936), 5 ff.

[3] M. Vasić, *Starinar* I (1906), 89 ff.; *Memnon* I (1907), 177 ff.; *Starinar* II (1908), 71 ff.; *PZ* II (1910), 23 ff.; III (1911), 126 ff.; *Man* XXX (1930), 197 ff.; *ILN* Oct. 18, 1930, 664 ff.; Nov. 1, 1930, 752 ff.; *P. Vinča* I–IV (1930–1936); *Starinar* XIII (1938), 3 ff. and 230 ff.

[*] The following abbreviations, additional to those customary in *BSA*, are used in this article:

AfO = *Archiv für Orientforschung*
BASOR = *Bulletin of the American Schools of Oriental Research*
BASPR = *Bulletin of the American School of Prehistoric Research*
BRGK = *Bericht des römisch-germanischen Kommissions*
DS = C. Tsountas, Αἱ προϊστορικαὶ ἀκροπόλεις Διμηνίου καὶ Σέσκλου (1908)
JNES = *Journal of Near Eastern Studies*
MPKW = *Mitteilungen des Prähistorischen Kommissions, Wien*
OLZ = *Orientalistische Literaturzeitung*
PMac = W. A. Heurtley, *Prehistoric Macedonia* (1938)
PT = A. J. B. Wace and M. S. Thompson, *Prehistoric Thessaly* (1912)
P. Vinča = M. Vasić, *Preistoriska Vinča* I–IV (1930–6)
WPZ = *Wiener Prähistorischer Zeitschrift*

I am grateful to Professors V. G. Childe and C. F. C. Hawkes and to the editors for assistance with the English version of my article and for valuable criticism.

The plates of this paper are taken from my work *Chronologie der jüngeren Steinzeit Südost- und Mittel-Europas* which is now in the press at Berlin.

The prehistoric settlement at Vinča originated on an almost horizontal terrace of clay, but, in the course of time, a tell developed over the settled surface, as in other prehistoric settlements in South-Eastern Europe. The highest point of this hill was taken in 1911 as point 0·00 (Kote ∇ 0·00), downward from which the depth of individual finds was counted. Though the pit-dwellings which were dug into the clay lie at the same height, the surface of the hill is not flat, but broken. Therefore the contemporary house-remains and objects discovered, though they are equally high above the original level, do not lie at the same depth if measurement is made from the surface downward. In order to change the relative minuses into absolute depths below datum it will be necessary to add the vertical distance below datum of the surface on the spot where each object was found.[4] This conversion is the main difficulty in using the work. The second difficulty is produced by the fact that the excavation, and the publication also, was made according to a preconceived plan, without regard to different strata and pits. The soil was dug in layers of ten centimetres each, and the objects were marked only according to their depth.[5] The existing ditches and disturbances of the layers were disregarded (with the exception of the single groups of pottery found in some houses), so that it sometimes occurs that comparatively recent objects are published as contemporary with older ones, although they got into the older strata only by subsequent movements of earth.[6] If all these facts are noted and if the as yet unpublished material (the four volumes present a rich variety) and excavations on other sites are taken into consideration, a clear chronological picture can easily be drawn.

Relation of Vinča to Starčevo

When I checked the whole material according to these rules in 1940–1, I obtained the result that the Starčevo culture (named after the site near the village of Starčevo on the Danube bank opposite Vinča) [7] is without doubt older than the Vinča culture itself.[8] It was evident that some of the pits dug in the clay at Vinča contain only Vinča remains and some only Starčevo remains. Only in a single case were the remains of both cultures intermingled. Moreover it is very significant that the percentage of Starčevo remains diminishes continually from 9·00 onwards (above 8·00 there are only single pieces to be found), which is easily to be explained, considering the pit-digging of the Vinča people. This conclusion is further emphasized by the results of the excavations at Starčevo itself. Though the site of Starčevo is situated at a distance of only five kilometres from Vinča, and there are plenty

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[4] M. Vasić, *P. Vinča* II (1936), 109.

[5] *Id.*, *PZ* II (1910), 24.

[6] *P. Vinča* III (1936), 1; II (1936), 3.

[7] Fewkes, Goldman, Ehrich, *BASPR* IX (1933), 33 ff.; Vulić and Grbić, *CVA Yougoslavie* III, pl. 1.

[8] V. Milojčić, *Das ältere Neolithikum in Serbien* (Dissertation, Wien, 1944).

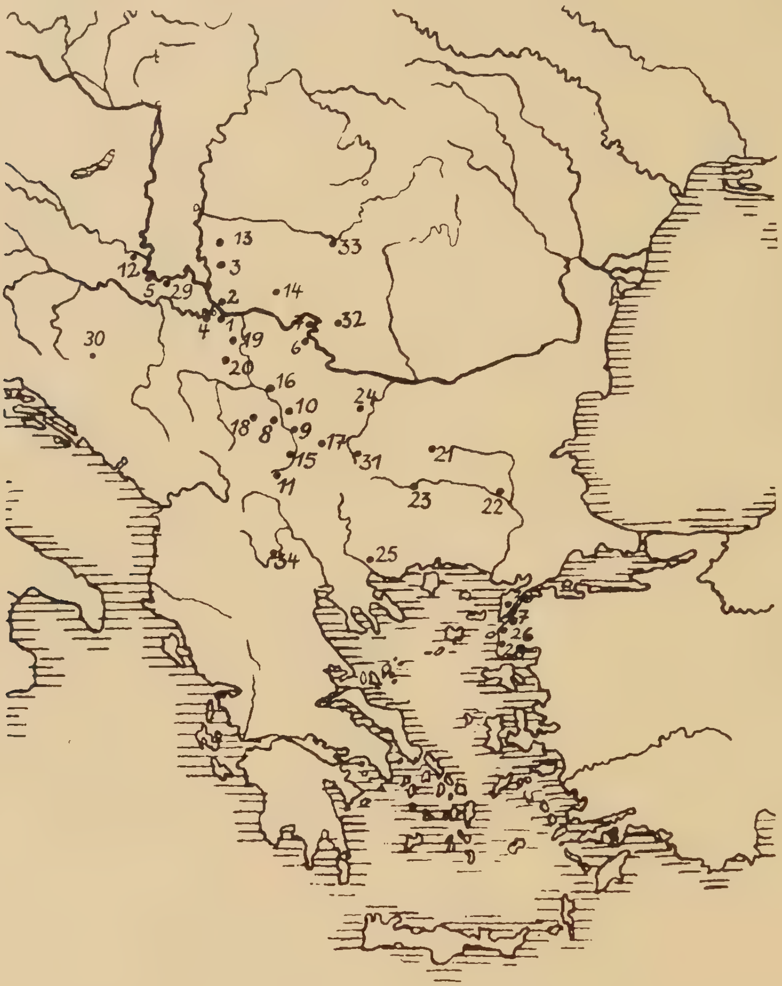

FIG. 1.—MAP OF SITES IN BALKANS.

TABLE OF SITES.

1. Vinča.
2. Starčevo.
3. Aradac.
4. Skela.
5. Vučedol.
6. Obala near Korbovo.
7. Obala near Velesnica.
8. Kavolak.
9. Bubanj.
10. Vrtište.
11. Pavlovci.
12. Sarvaš.
13. Botoš.
14. Potporanj.
15. Gradac.
16. Šetka near Ražanj.
17. Kovanluk.
18. Pločnik.
19. Dizaljka.
20. Jablanica.
21. Banja near Karlovo.
22. Deve-Bargan near Trnovo-Seimen.
23. Tell-Mečkur.
24. Morovitza.
25. Polystylo.
26. Troy.
27. Protesilaos-Mound.
28. Kum Tepe.
29. Babska.
30. Butmir.
31. Gnilane.
32. Salcutza.
33. Tordos.
34. Servia.

of Vinča settlements on both left and right banks of the Danube,[9] not a single piece of Vinča manufacture was found here. Hence it is beyond doubt that the two cultures cannot have had their climax at the same time; the Starčevo culture must have been the older one. This is confirmed by conditions on other sites, such as Kremenjak near Aradac,[10] Skela near Beograd,[11] Vučedol (the oldest stratum) near Vukovar,[12] " Obala " near Korbovo,[13] " Obala " near Velesnica,[14] Kavolak near Prokuplje,[15] Bubanj,[16] Vrtište[17] and Kovanluk,[18] all of them near Niš, and so on. The stratigraphical situation is repeated on the site near the village of Pavlovac, on the watershed between the Morava and Vardar valleys.[19] The trial excavations made by Count A. Orssich-Slavetich showed that here the lowest horizon is a stratum with Starčevo manufactures. This is covered by a stratum with typical products of the older Vinča culture, which again is covered by a stratum of the Bubanj culture, still to be discussed.

A more detailed examination of the Starčevo material shows clearly that the Starčevo culture was by no means a short-lived one. Its development lasted a long time, and by virtue of stratigraphical and typological-geographical observations this time can be divided into four main periods. It is not my task here to refer in detail to these periods, as this has been done already in another place,[20] but they should at least be depicted briefly and substantiated by the most essential stratigraphical-chronological evidence.

The Starčevo Culture

The first period is mainly characterised by the so-called barbotine vases. This ware was made from well-levigated clay, to which organic substances such as straw and chaff are occasionally added. The surface is a yellowish brown, but the core, owing to incomplete firing, remained black. The main shapes are globular bowls with incurved rims, storage vessels and small pots of low, conical form; in almost every case the base is thickened or stands on a hollow pedestal (Fig. 2. 16, 17, 19). There are also hemispherical bowls with or without pedestal (Fig. 2. 15, 18). The base is sometimes rounded (Fig. 2. 14). The decorative elements of this period consist mainly of finger-nail impressions and pinching, and of small, broad furrows drawn with a blunt-nosed tool (Fig. 2. 1–3, 7). Sometimes crude pellets of clay were thrown on the surface. Red-slipped painted wares are not yet known in this period. This period is assured by stratigraphical observations at Starčevo, where this ware was found in the bottom level of the section.[21] On various sites of the Starčevo culture this ware has been found alone,[22] from which may be inferred that there was in fact a period in which it was the prevalent domestic ware.

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[9] Pančevo and Kovin, material in Museums of Pančevo and Vršac.

[10] F. Milleker, *Starinar* XIII (1938), 106; D. Berciu, *Insemnari archeologice* (1941), 11 ff.

[11] Material in the National Museum of Beograd.

[12] R. R. Schmidt, *Die Burg Vučedol* (Zagreb, 1945).

[13] V. Fewkes, *Proc. Am. Phil. Soc.* LXXVIII–LXXXII (1937), 387 ff.

[14] *Ibid.*

[15] *Id.*, *BASPR* XII (1936), 58 f.

[16] A. Orssich-Slavetich, *Mitt. Wiener Präh. Komm.* IV (1940), 20 ff.; V. Fewkes, *op. cit.*, 63 f.

[17] A. Orssich-Slavetich, *Starinar* X (1935–6), 178 ff.; Fewkes, *loc. cit.*

[18] Orssich-Slavetich, *op. cit.*, 174 ff.; Fewkes, *op. cit.*, 59.

[19] Excavations by A. Orssich-Slavetich, not yet published; Fewkes, *op. cit.*, 55 ff.

[20] V. Milojčić, *Das ältere Neolithikum in Serbien* (Diss. Wien, 1944).

The second period carries on the 'barbotine' tradition in the same way, but some new details appear. At first a new red-slipped ware becomes frequent. The clay of this ware is equally well levigated and never contains organic substances. The core is blackish, but near the surface the clay takes a yellowish-brown hue. The inner and outer surfaces were covered by a red slip. The inside of amphorae and the underside of pedestals are unpainted. This ware often shows painted decoration in white or dark brown. It is typical that the motives in white show a markedly rectilinear character. The commonest decorative elements are groups of lines (Fig. 2. 4, 6), bordered by two broad ones (Fig. 2. 10); cross-hatching bordered by broad lines (Fig. 2. 5, 8); chequers, hatched triangles, etc. (Fig. 2. 9). The decoration shows a radial arrangement, which is especially characteristic of this group. Towards the end of this period dark-on-light painting seems to become more frequent. Semicircles and scrolls appear below the rims of bowls. This class gradually develops into a ware with a finely burnished, but never polished, surface, varying in colour between light and dark brown. A rare black slipped ware also seems to belong to this period. At Starčevo and Vinča there have been found only a few pieces of this ware;[23] they differ essentially in form and manufacture, although M. Vasić counted the Vinča pieces as belonging to the ordinary black monochrome Vinča ware. While the usual black monochrome Vinča vases, called 'bucchero' by Vasić,[24] are of a uniform greyish black in the break, and their black surface is given by the clay itself, the clay of the black Starčevo vases varies in colour with firing, as in other fabrics. The core is black and towards the inner and outer surface the clay takes a yellowish hue. The black surface is caused by a slip which often flakes off, revealing the light coloured clay. The surface on ware of this period is lustrous, but no traces of a polishing tool are visible.

The third period is characterised by black and polychrome painted ware with curvilinear decoration. The coarse barbotine ware is of less importance, but is better fired and shows monochrome in the break like all other fabrics;

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[21] V. Fewkes, *op. cit.*, 27, n. 109; 33.

[22] *Id.*, *Proc. Am. Phil. Soc.* LXXVIII–LXXXII (1937), 387 ff.

[23] Sherd from Starčevo in the Museum of Vršac; *P. Vinča* IV (1936), 9, fig. 7, pl. II.

[24] *P. Vinča* I (1932), 37, 88 ff.; IV (1936), XIV ff.

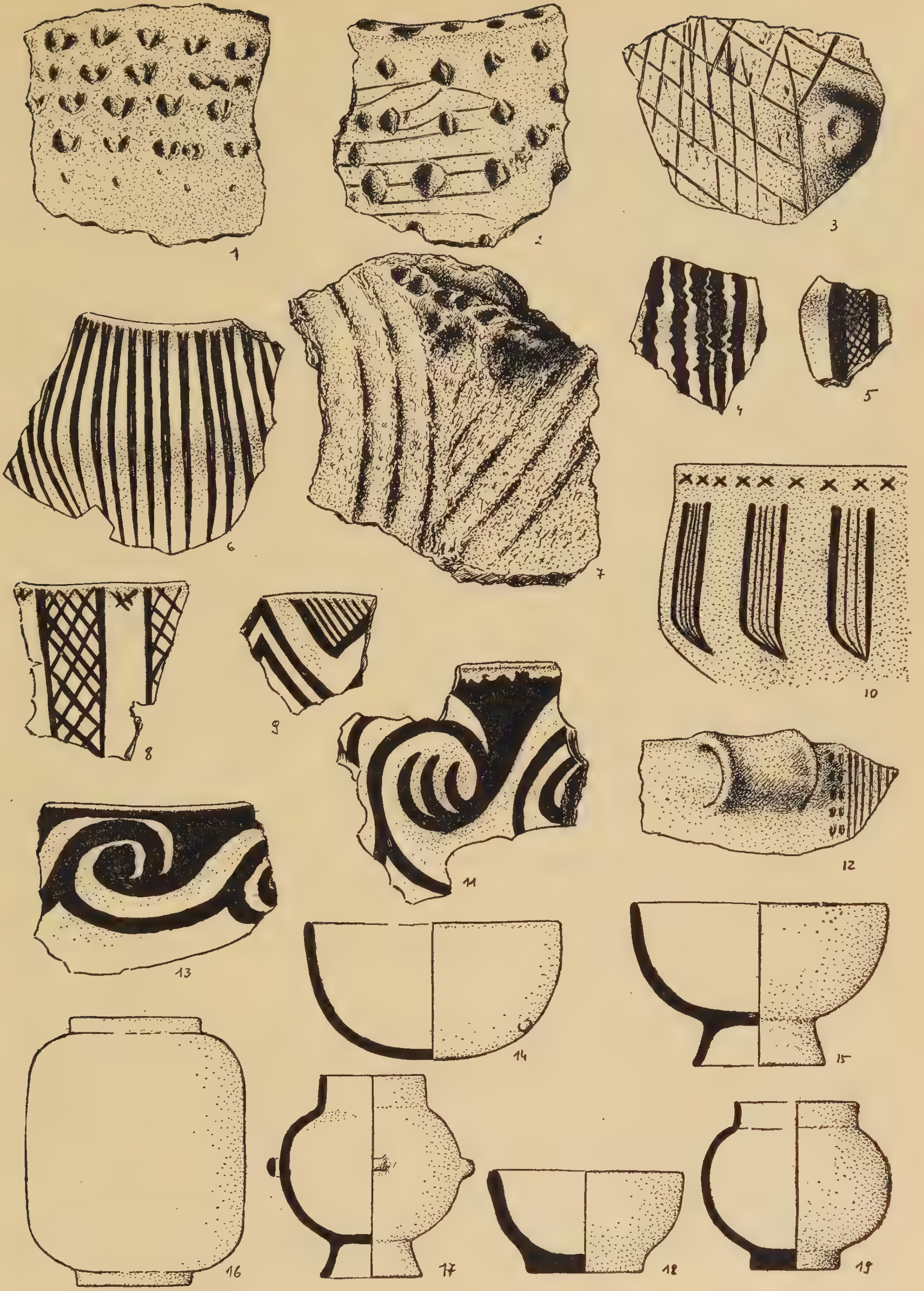
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FIG. 2.—STARČEVO CULTURE.

From Fewkes, Goldman, Ehrich, *BASPR* IX (1933); Vulić and Grbić, *CVA Jugoslavie* III; A. Orssich-Slavetich, *MPKW* IV (1940); F. Holste, Sketch-book in Prehistoric Seminar of University of Marburg a.d. Lahn.

organic substances are only very rarely mixed into the clay. The burnish unslipped ware becomes more frequent and to a great extent replaces the coarse barbotine. It too is better fired. Red-slipped vases occur more frequently, black-slipped ones have disappeared. As for the painted wares, white goes completely out of use; this is very characteristic, since motives of the second period are never painted according to the polychrome technique. The new technique shows, beside polychrome painting, a use of deep black on a red or yellowish ground, with curvilinear motives. Real spiral motives are rare, fanciful scroll motives are commoner; there is a tendency towards spiraliform motives (Fig. 2. 11, 13). The main difference between the second and third periods, however, is that the latter prefers horizontal arrangement of decoration, while in the second period radial arrangement is most frequent. The polychrome ware, black on white or red or yellow, has the same decorative elements.

A clean stratigraphical division of these last two periods has not been given hitherto, though stratigraphical observation shows that they are later than the first period. The differences in style and technique would alone be enough to justify a division of the material, but there are other reasons too. Thus the division is justified by oral communications made by M. Grbić, who excavated himself in Starčevo and also attended American excavations undertaken there later.[25] According to him geometrically painted vases with rectilinear patterns were the main finds in some of the pits, while in others curvilinear spiraliform patterns came to light. Moreover it has been observed that on some sites there was only geometrical pottery of the second period with rectilinear designs, and on other sites only curvilinear spiraliform decoration was found. Thus we have vases of the second period at Bubanj,[26] Kavolak,[27] Pavlovci,[28] Vinča,[29] Vučedol[30] and Sarvaš,[31] and of the third period at Vrtište[32] and Knjaževac.[33] All these facts, added to the differences in style and technique, seem to advocate a division.

The fourth period comprises the final aspects of this culture, which are in an especially characteristic way traceable throughout the country. While the sites of the first three periods seem to be equally scattered over the whole of Serbia, the sites of the fourth period appear principally in the Northern Banat and in the neighbouring areas of Hungary, where they are well known as the ‘ Körös culture ’.[34] Some of the Hungarian sites, particularly those containing painted vases, may be older, contemporary with the second and third periods in Serbia. The main characteristic of this final stage of development is a general decline in design and technique, traceable in all spheres of life. Painted wares become extremely rare, while barbotine fabrics again play an important part, and develop new decorative elements, by which they are easily to be told from older wares.[35] Of special interest are the plastic human and animal forms, applied to the shoulder of large bowls. Grain-impressions, indented ridges and bosses are also frequent. Everywhere a tendency towards plasticizing the surface can be felt. Some new shapes are added: bowls on several small feet or with cruciform base, large bowls with double handles, which are frequent in Early Danubian *Bandkeramik*.[36] Burnished vases continue to be manufactured, but the firing deteriorates and the black core reappears. Painted and slipped vases occur only very rarely. A real slip is no longer applied; like the black paint, it is of a transparent watery kind. Motives are hardly to be distinguished, and rectilinear designs seem to be most frequent. The chronological position of this period may be recognized from the points it has in common with the Vinča culture and with the older Danubian I *Bandkeramik*, Bükk culture and the oldest Tisza culture.[37] As this question has already been treated in detail in another place, I wish only to observe that, in the levels between 8·60 and 8·00 at Vinča, several important objects of the fourth period of the Starčevo culture were found.[38] It was in the level from 8·00 to 7·10 that the first imported sherds of the Tisza culture occurred,[39] which confirms the belief that the latest period of the Körös culture is older than the Tisza culture in Hungary.

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[25] M. Grbić, *Récueil d'études dédiés au W. Demetrykiewicz* (Posen, 1930), 110 ff.; Fewkes, Goldman, Ehrich, *BASPR* XII (1936), 33 ff.

[26] A. Orssich-Slavetich, *Mitt. Wiener Präh. Komm.* IV (1940), 27.

[27] V. Fewkes, *BASPR* XII (1936), 58 f.

[28] Excavations by Orssich-Slavetich, not yet published.

[29] *P. Vinča* II, 130 ff., pl. 106, fig. 34; pl. 221, figs. 268–9; pl. 222, figs. 271–2, 274–6; pl. 223, figs. 277–8.

[30] R. R. Schmidt, *Die Burg Vučedol* (Zagreb, 1945).

[31] *Ibid.*

[32] A. Orssich-Slavetich, *Starinar* X (1935–6), 179 f., fig. 1; V. Fewkes, *BASPR* XII (1936), 63.

[33] D. Berciu, *Insemnari archeologice* (1941), 11 ff.

We mention a few details of the remaining repertory. The stone industry is, strange to say, rather scanty and very simple. Blade industry is most frequent. Blade-scrapers, blade-saws and round scrapers were found. At Starčevo and on other sites objects of Hungarian obsidian have come to light, though rarely. The appearance of obsidian and of sherds of imported Bükk I vessels in the Serbian Banat[40] shows that relations already existed previously between the Bükk mountains and Northern Serbia. Thus the painted early Bükk and Šarka fabrics[41] in Hungary and Bohemia receive a natural explanation as collateral wares influenced by the Starčevo culture.

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[34] J. Banner, *Das Tisza-Maros-Körös-Gebiet bis zur Entwicklung der Bronzezeit* (1942), 14 ff.

[35] *Ibid.*, 23.

[36] Hörnes-Menghin, *Urgesch. der bild. Kunst*, III (1925), 297, fig. 3; Ebert, *Reall. der Vorgesch.* II, pl. 22, b4; 25, a7; A. Stifft-Gottlieb, *Mitt. Anthrop. Gesell. Wien* LXIX (1939), 149, pl. 3, figs. 43–4.

[37] V. Milojčić, *Chronologie der jüngeren Steinzeit Mittel- und Südosteuropas* (Habilitations-schrift, University of Munich, 1946).

[38] *P. Vinča* I (1932), figs. 94, 97, 132, 134; II (1936), figs. 54, 56.

[39] *P. Vinča* II, 37 ff., figs. 62–8; 81–4; 187 f., figs. 366–7.

[40] Milojčić, *op. cit.*, pl. 11, fig. 3 (prehistoric site of Crna-Bara, near Vršac, Serbian Banat).

[41] F. Tompa, *Bandkeramik in Ungarn* (1929), 50 f., pl. 46, fig. 1; J. Jira, *Mannus* III (1911), 234 ff.; E. Simek, *WPZ* I (1914), 32 ff.

Beside the typical 'shoe-last celts' or hoes, there occur numerous hoe-like or adze-like 'flat celts' of trapezoidal form; also a small and degenerate-looking kind of round-bodied axe (*Walzenbeil*). Bone industry is highly developed; especially frequent are elliptical bone spoons. A speciality are figurines, which are however not so frequent as in the Vinča culture. All figurines have long necks, uptilted breasts and pronounced steatopygy. Eyes are rendered by slanting cuts, and thus look mongoloid. Hair is similarly incised. Also numerous are altars, nearly always with four feet and with sacrificial bowls on a small table. A further feature is the comparative rarity of stamp-seals. The dead were buried in chamber-like grave pits, which may be regarded as collective tombs. The best example is that with nine skeletons from Vinča.[42]

THE VINČA CULTURE

Now let us briefly depict the various periods of the Vinča culture. This is desirable for two reasons: first, to show that the stratigraphy of Vinča is of prime importance for the understanding of the prehistoric chronology of South-Eastern Europe; secondly, because the relations of the culture have often been misunderstood. From M. Vasić's big volumes and his various essays, can be extracted, in spite of his regrettable onesidedness, a firm working foundation, if used thoroughly. There is also material otherwise obtained which completes the picture and makes an exhaustive summary possible. The late F. Holste, using Vasić's evidence, established a division into periods, which on the whole is usable, although it is misleading in the matter of the interrelations between the Vinča and Starčevo cultures.[43] Our own researches of 1938–42 have only completed Holste's work in detail and confirmed the division into periods. Previously, V. G. Childe and O. Menghin divided the Vinča material simply into two groups, an earlier and a later.[44] This grouping, so far as it goes, may still be considered valid. For, as we see it, the stratification of the occupied areas of the site is interrupted at a depth of 6·00 metres by a gap. This gap represents a breach of continuity in the occupation of the site, but not in the life of the culture as a whole, which at other sites can easily be traced in an uninterrupted succession of strata from earlier to later (cf. Potporanj, p. 279 below). In order to present these facts conveniently, we have in general left the division of Childe and Menghin unchanged. Their earlier group ('Vinča I') comprises periods A, B1 and B2, which are contained in the strata from 9·5 to 6·0 metres in depth. These represent their culture in ‘ pure ’ and typical form. The later group (‘ Vinča II ’) comprises periods C and D, from 6·0 to 2·50 metres; these represent a specialized, local development of their culture.

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[42] *P. Vinča* II, 9 ff., pll. 8–17.

[43] F. Holste, *WPZ* XXVI (1939), 1 ff.

[44] V. G. Childe, *The Danube in Prehistory* (1929), 27 ff.; O. Menghin, *Weltgesch. der Steinzeit* (1931), 52 ff.

The earlier Vinča culture appears in Serbia as a completely new one, which, it should be stated, is not autochthonous but introduced from abroad. All the material evidence forms an unbridgeable contrast to the preceding Starčevo culture, which in its time was spread all over Serbia, and to a great extent over Western Bulgaria[45] and Serbian Macedonia.[46] The Vinča culture was foreign to Serbia; and it is completely wrong to derive from Serbia late neolithic features in Macedonia[47] and the so-called ‘ Danubian wares ’ of Thessaly and Greece.[48] The Vinča culture cannot have originated anywhere in Europe north of the Balkans. In the North and North-West there was the older *Bandkeramik* or ‘ Danubian I ’ culture of Croatia and Hungary. In the East and North-East there were the pre-Cucuteni and Boian-A cultures. The source of the Vinča culture must be sought in the Aegean area, and its bearers, as we shall see, came from the South.

Period A. The first settlers of the Vinča culture founded their settlement at Vinča on the site which the Starčevo people had some time previously abandoned. In this period were built, in varying degrees of crudity, rectangular houses with one or two rooms above the surface of the ground, constructed of beams and clay. Numerous pits (*bothroi*), dug into the natural clay, served as cellars. All of them are comparatively small (diameter 2 to 3 m.) and their sides are almost vertical. The settlement was protected by a ditch, which was several times renewed, but at the level of 7·20 was already abandoned.[49] In this period, the dead were buried outside the settlement, as is established by the cemetery near the village of Botoš.[50] We have single burials in a contracted position with a small number of objects accompanying them: a bowl or a stone axe, and sometimes ornaments made of fossil spondylus-shells.[51] Cremation burials also seem to have occurred.[52] Pottery can on the whole be divided into four main groups with several sub-groups:

(*a*) mechanically highly polished ware (‘ bucchero ’)
(*b*) ware with lustrous paint (like neolithic *Urfirnis*) or clay slip
(*c*) burnished ware with incised decoration
(*d*) coarse domestic wares.

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[45] N. Petkov, *Godišnjak* (*Annuaire*) *Plovdiv*, 1928–9, 185 ff.; J. H. Gaul, ‘ The Neolithic Period in Bulgaria ’, *BASPR* XVI (1948), 10 ff.

[46] V. Fewkes, *BASPR* X (1934), 53.

[47] *PMac*, 113 ff.

[48] H. Frankfort, *Studies in Early Pottery* II (1926), 11 ff.; 42 ff.; K. Grundmann, *Ath. Mitt.* LVII (1932), 105 f., 112, Beil. XXIV–XXVI.

[49] M. Vasić, *PZ* II (1910), 25 f., pl. 7*a*.

[50] M. Grbić, *Starinar* IX (1933–4), 40 ff.

[51] O. Seewald, *WPZ* XXIX (1942), 1 ff.; XXX (1943), 198 ff., 199, 4.

[52] *P. Vinča* II, 182, pl. 101, fig. 365.

In contrast to Starčevo, Vinča pottery is fired to a ringing hardness; when broken, it is seen to be monochrome and usually unslipped. The pottery is mainly dark grey to black and highly polished; the outside and inside have a mechanically produced polish. Sometimes the lower part of a vessel is left unpolished. Single polishing-strokes are still visible at this period. Later technical perfection increases. A brick-red monochrome ware forms a sub-group, but is rare.[53] A third group is the "black-topped" ware, which goes out of use at the beginning of the next period.[54] This class is

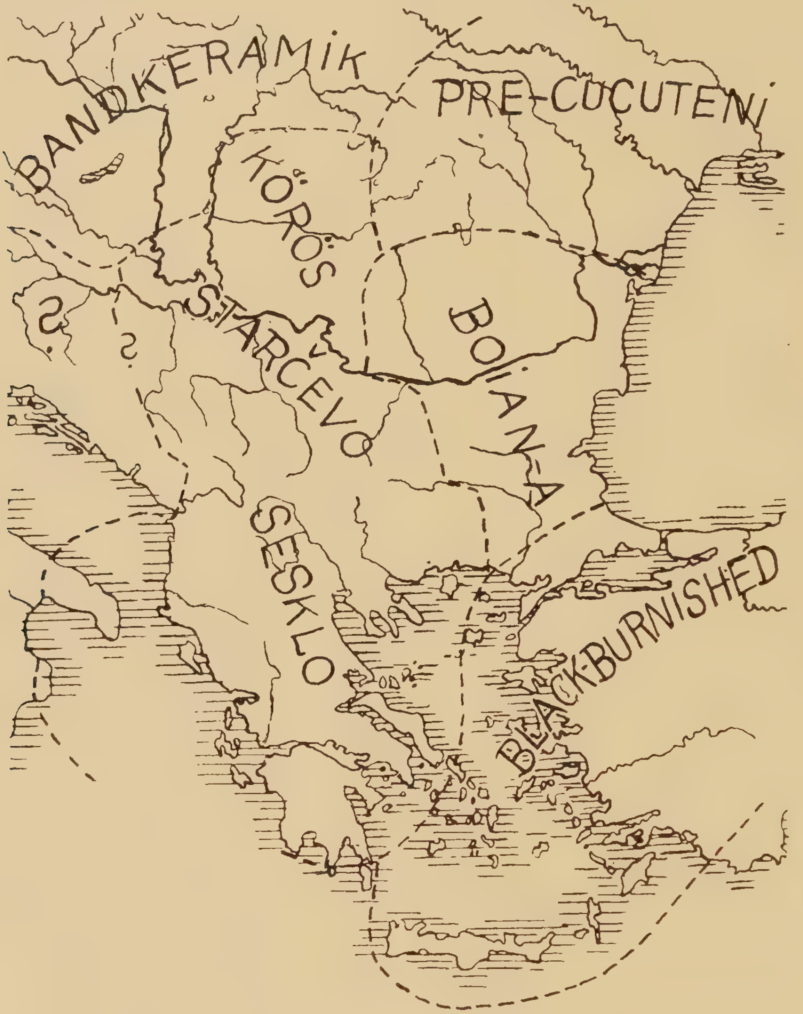

FIG. 3*a*.—PREHISTORIC CULTURES OF BALKANS, *c.* 3000 B.C.[52a]

[52a] The map Fig. 3*a* shows 'Sesklo' as the generic term covering 'Tsani, Tasngli, Chaeronea', etc., given under the headings 'Greece' and 'Thessaly' in the table in Fig. 11.

[53] *P. Vinča* II,182, pl. 121, fig. 270.

[54] *Ibid.*, pl. 105, fig. 30.

difficult to separate from the slipped ware, as in several vases the red colour of the surface comes from a coloured clay. The three groups, especially the first, are characterized by the technique of burnished decorated and rippled designs (Fig. 4. 3, 5, 10–12), peculiar to the Vinča culture. It need not be stressed that neither fabric nor decorative technique has any predecessors in the Danube area, and so the culture must be regarded as alien. A rare fabric, not recognized by Vasić, has a lustrous paint of a dark brown or reddish brown. Such pieces are hard to distinguish from the corresponding Macedonian and Greek ones of the late neolithic age.[55] This fabric,

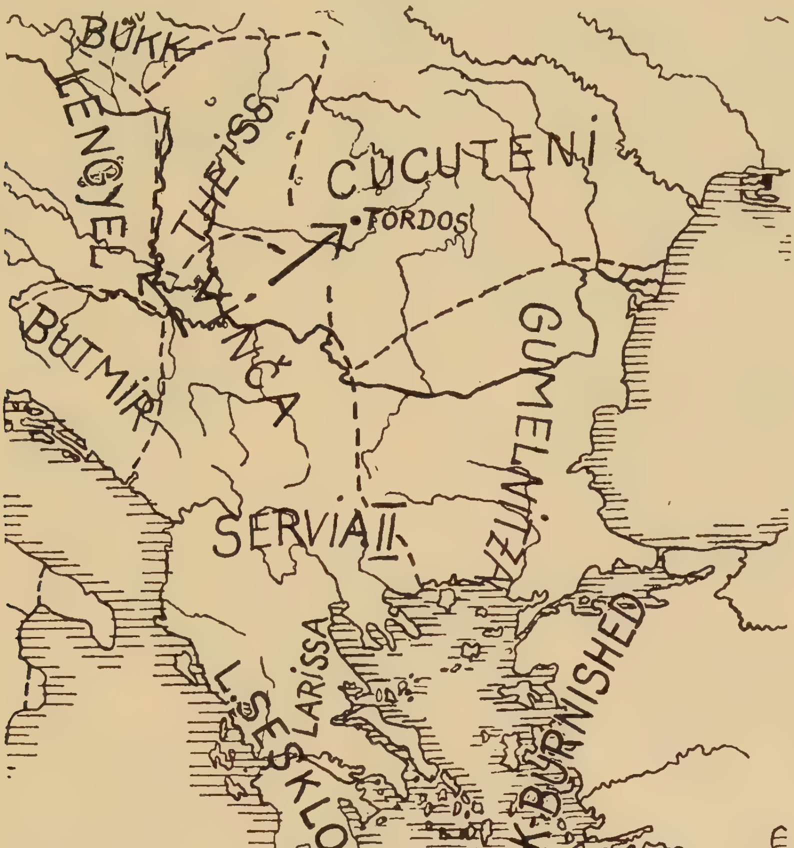
BÜKK
LENGYEL
THEISS
CUCUTENI
TORDOS
BUTMIR
VINČA
GUMELNITZA
SERVIA II
LARISSA
L. SESKLO
BLACK BURNISHED

FIG. 3*b*.—PREHISTORIC CULTURES OF BALKANS, *c.* 2600 B.C.[54a]

[54a] ‘ Theiss ’ on Figs. 3*b* and *c* should read ‘ Tisza ’.

[55] *PMac*, 73; E. Kunze, *Orchomenos* II (1931), 31 ff.

and also the black-topped ware, occur only in this period, except for imported pieces. The technique of a red-slipped surface is often found in fruit-stands (Fig. 4. 2). In older vases, which still belong to group A, only the foot and the lower part are slipped, the upper part slowly takes on a black colour.

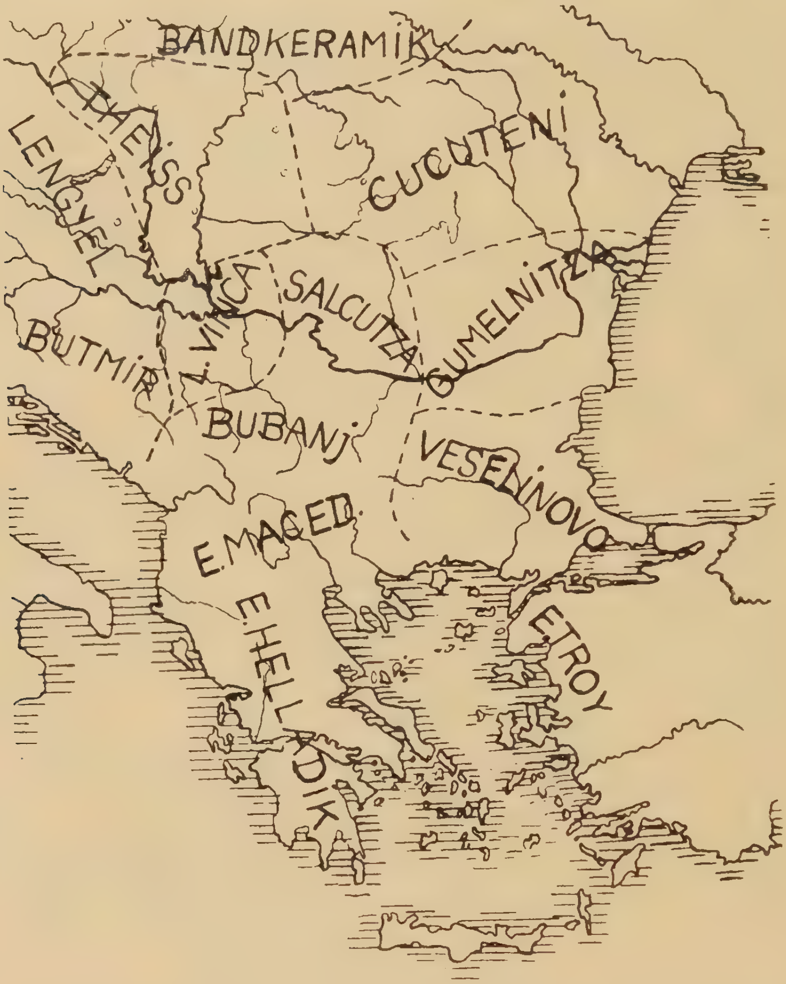
BANDKERAMIK
THEISS
LENGYEL
CUCUTENI
VINCA
SALCUTZA
GUMELNITZA
BUTMIR
BUBANJ
VESELINOVO
E.MACED.
E.HELLADIK
E.TROY

FIG. 3*c*.—PREHISTORIC CULTURES OF BALKANS, *c.* 2200 B.C.

Later, in groups B1 and B2, the whole surface is red-slipped.[56] A special group is formed by the amphorae, whose shoulders are decorated with dotted ribbons and the rest of the surface well burnished. The decorative motives of Period A comprise angular bands, triangles, horned gables, etc. (Fig. 4. 7, 8). Typical of this period is the asymmetrical style of decoration. Closely

[56] *P. Vinča* II, pl. 105, fig. 30; 115, fig. 246; 116, fig. 247; 117, fig. 250.

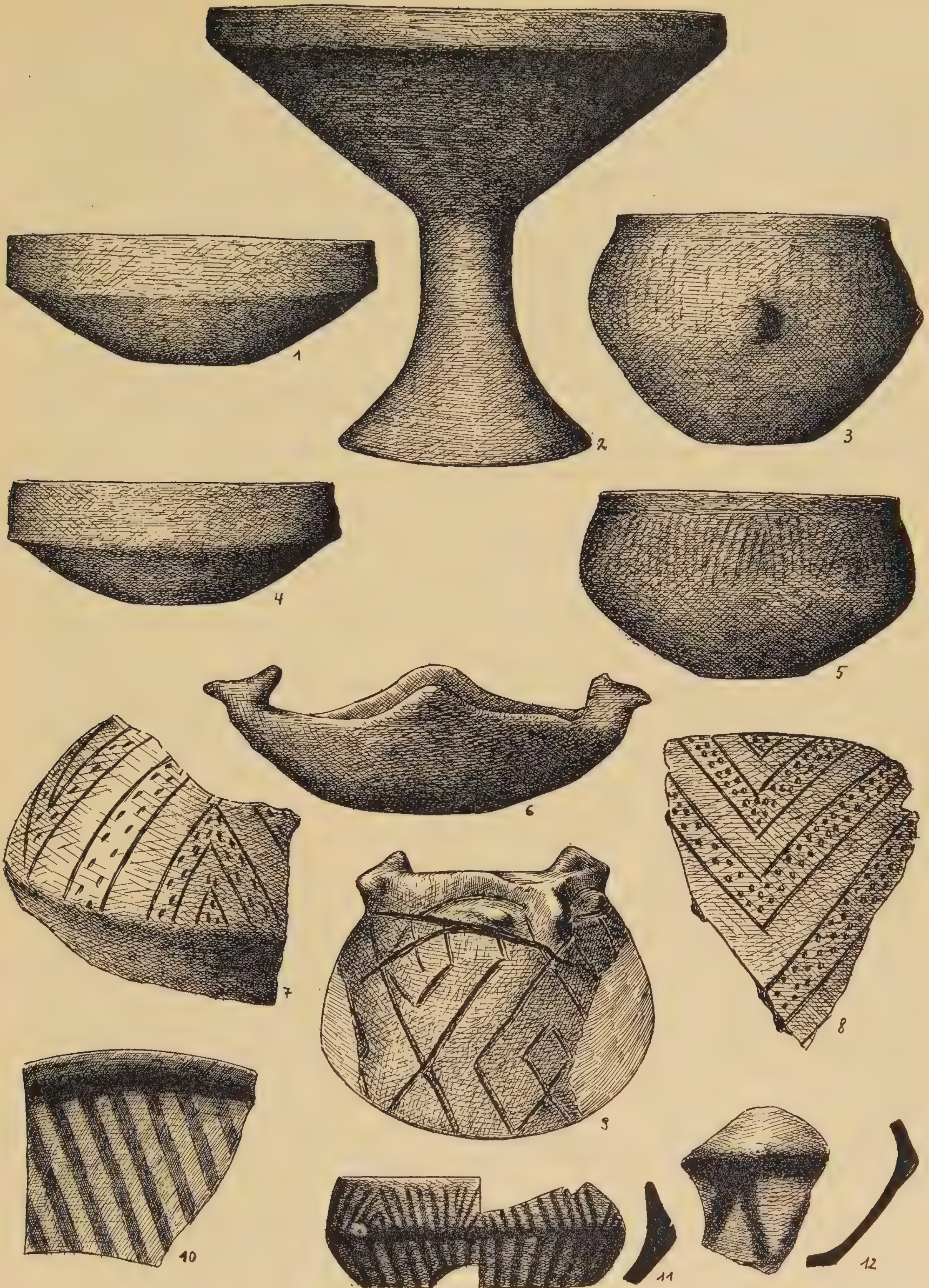
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Fig. 4.—Vinča A.
From M. Vasić, *Preistoriska Vinča*, I–IV; Vulić and Grbić, *CVA Jugoslavie* III.

connected with the amphorae are the face-lids, which show a versatile system of decoration, advanced even when compared with more recent vases. It is especially characteristic that horns are bevelled in this period (Fig. 4. 9).[57] These vessels no doubt served religious purposes. It is not yet sure that they were urns, as Vasič suggested. It is important to note that one of these vessels was found in a house which obviously served a religious purpose.[58] A large vessel and some fragments, which bear a human face on their shoulder, must be regarded as belonging to the burnished-ware group.[59] The clay used for this ware has an admixture of sand and the surface is treated rather carelessly. Cooking pots and large storage vessels were made from impure clay, but are thoroughly hard-fired. The decoration consists of simple knobs and incisions. These vessels are often spouted. In group A, biconical shapes are typical for all fabrics (Fig. 4. 1, 4), though globular shapes were not unknown (Fig. 4. 3, 5). A real neck is still always absent, and fully appears only in the next period.

Together with new groups of pottery, new plastic forms appear. Figurines, ritual vessels, altars and other religious objects become more frequent (Fig. 4. 6). In contrast to Starčevo figurines, all parts of the body are here modelled schematically. In the main we have female figurines, though male ones also occur. The face is formed by a rounded, tilted triangle; the nose is a small protrusion, the eyes two angular incisions. The head is distinctly detached from the neck, hands are shaped as stretched-away stumps. Breasts and buttocks are only slightly indicated, in contrast to Starčevo figurines. Sometimes we find a girdle round the waist and a necklace or the border of a shirt incised round the neck. The surface of these figurines was often painted with red, white or black crusted colour, applied after firing.[60] This technique seems also to have been used in painting certain vases.[61] Besides standing figurines, we have, even so early as this, idols sitting on a pedestal. Numerous zoomorphic and anthropomorphic vases served religious purposes, with a hole on top to pour out liquids. There are three-footed small altars with animals' heads (horse-heads?) and amulets of calcite. Palettes and grinders for grinding ochre colours served for toilet purposes. Bone-spatulas, often mistaken for figurines, were also used for cosmetics. Often simple double and triple finger-rings were made from bone.[62] Spear-heads and harpoons with two rows of prongs, typical of the earlier Vinča culture, were made from antlers.[63] From fossil spondylus-shell arm-rings, beads and pendants were made. The flint industry is very definitely a blade-industry. Stone axes of this period tend to the flat form, though ‘ shoe-last celts ’ are not unknown. Flint arrowheads, with a tang, are rare.[64] In the neighbouring mountains cinnabar and galenite seem to have been quarried.[65] From the Bükk mountains obsidian was obtained, though not quite as copiously as in the next period.

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[57] *P. Vinča* II, 69, fig. 108, 114, 118; pl. 41, fig. 104.

[58] *Ibid.*, 37 ff., 45, pl. 35, fig. 79.

[59] *Ibid.*, 63, pl. 40, fig. 97; 64, figs. 98–9.

[60] *P. Vinča* III, 6, fig. 4g; 7, figs. 11, 16; 9, figs. 25, 26, 28 ff.

[61] *Ibid.*, 22, fig. 40; 182, fig. 365

[62] D. Karapandžić, *Starinar* I (1923), 151 ff., pl. 2.

[63] *P. Vinča* IV, pl. 77, fig. 241.

Period B 1. Settlement at Vinča seems to have been carried on without interruption, though the earliest settlement was apparently destroyed by fire. The remains of the old settlement were levelled and covered with a layer of clay. A new site (at a depth of about 7·80 m.) was thus obtained, on which the new village was founded. The ditches of the earlier settlements, whose level is at a depth approximately between 8·40 and 8·0 m. (house-floors at 8·40) were abandoned and houses were built in their place. Houses were generally built larger and more regularly, but the building technique remained unchanged up to the end of the Vinča period. Still in the same period, this settlement was abandoned, because of a fire catastrophe, and a new one was founded on the débris. Large quantities of clay were brought to the spot to level the ground. The new level lies at about 7·30 m. depth. In this settlement, in one of the houses, which was presumably used for religious purposes, several vases and one large cult-vessel were found among the ruins.[66] Hence it can be inferred that the settlement of this period came to a violent end.

The contemporary cemeteries are not yet known. Within the settlement the dead seem to have been cremated and deposited in urns. During the earlier excavations calcined human bones were found in every stratum, but no clear evidence of cremation-graves could be obtained. In 1934 Vasić apparently obtained two. At a depth of 7·64 was found a pile of ashes about 0·95 m. long, extended in a S.W.–N.E. direction. In the ashes were found remains of a calcined human skull and of other bones.[67] Another such grave was found at a depth of 8·5 m. Here a rough pot 11·1 cm. high was found, containing ashes and calcined bones. The rim and the inside of the vessel were painted with crusted red colour.[68] As the same facts were observed by F. Milleker in 1932 in the Potporanj settlement, to be discussed below, in the transition period from B 2 to C,[69] it can be taken for granted that, at least from period B 1 of the Vinča culture onward, cremation of the dead was customary.

The kinds of pottery in use continue to be the same and show no momentous difference in the technique of manufacture. Lustrous paint and black-topped ware tend to disappear. Towards the end of this period two new types originate. One is a cherry-red, highly polished ware. The decoration is produced by scraping away the shining surface, so as to make the decorative motives appear dull.[70] The second is a white china-like ware with a red-fired core. Here we have a variety of the slipped wares.[71] The latter is rare, though incrustation painting in white is often found on idols and altars. With regard to decoration, it is significant that on black polished ware ribs are better and more carefully formed (Fig. 5. 1, 5). In this period pottery shapes of black bucchero ware show a clearly visible rim. Forms are softer and show a growing clearness in their division into three parts, in contrast to the division into two parts of bowls and pots of group A (Fig. 5. 1, 2, 5). Some new shapes are introduced, such as small amphorae with or without upturned lugs (Fig. 5. 3, 9). In the incised ware all angular ribbon-motives are abandoned and meanders appear for the first time (Fig. 5. 6). The red-slipped stemmed goblets follow in their shapes the general tendency to develop necks. The stem gets fuller and the foot itself gets flatter. The whole surface is slipped more and more efficiently. Coarse domestic ware continues to be produced, though a few new specialities are to be registered (Fig. 5. 4, 8, 10).

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[64] D. Karapandžić, *loc. cit.*

[65] V. Milojčić, *WPZ* XXX (1943), 41 ff.

[66] *P. Vinča* II, 37 ff., 44 ff. (burnt house from a depth of 7·45).

[67] *Ibid.*, 182, fig. 364*a–d*.

[68] *Ibid.*, 182, fig. 365.

[69] F. Milleker, *Starinar* XIII (1938), 116 ff.

The face-lids of amphorae with incised decoration show a completely symmetrical arrangement of details (Fig. 5. 12). Eyes and coherent ornaments are formed symmetrically in contrast to the casual asymmetry of older ones. Horns become vertical, but their origin from the horizontal can still be traced. The anthropomorphic vessels also acquire their fully developed shape. The face is fixed to the surface of vases. On the rims of bowls statuettes stand, and the altars, usually three-, more rarely four-footed, become more perfect (Fig. 5. 14). The same developments can be traced in the idols. They are made more carefully, eyes are drawn and the hair is incised. Other details in body and clothing are also indicated.

The stone industry and other small-scale products on the whole remain unaltered (Fig. 5. 13). An important fact is the frequency of obsidian, which is connected with the lively trade relations with the Tisza culture of Hungary. These relations receive further evidence in the fragments of imported Tisza ware.[72]

Period B 2. As mentioned above, the later Vinča settlement of period B 1 (7·30 m. depth) met its end by violence, as can be inferred from the numerous objects covered by the burnt debris in the house which served a religious purpose. The reconstruction of the settlement took place in the

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[70] *P. Vinča* II, pl. 117, fig. 249; 118, figs. 254–5.

[71] *Ibid.*, pl. 118, fig. 259; 120, figs. 260–1.

[72] *Ibid.*, 37 ff., figs. 62–8, 81–4; 187 f., figs. 366–7.

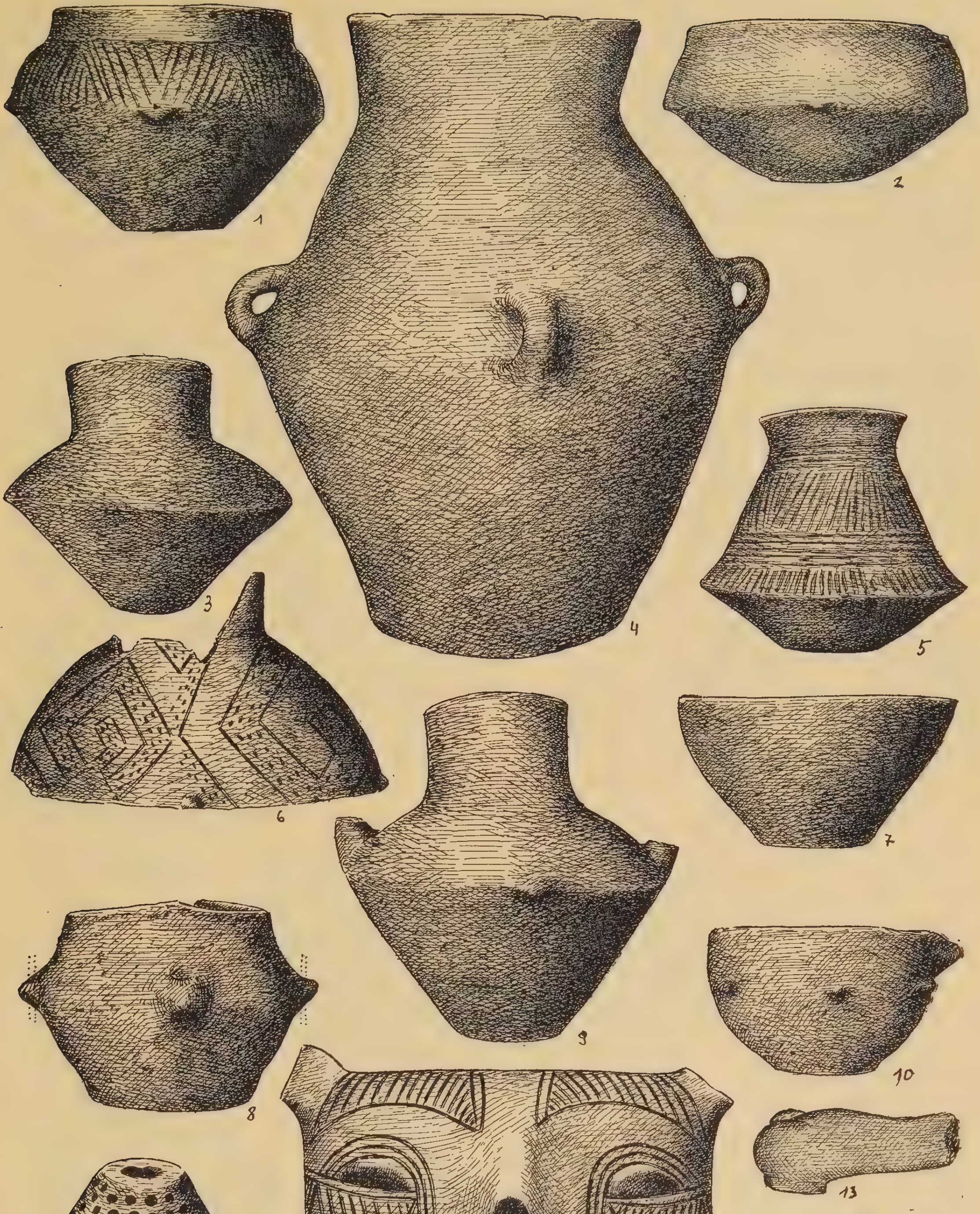
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FIG. 5.—VINČA B1.
From *Preistoriska Vinča*.

same way as that of the preceding one, at a depth of about 6·80 m. on the present tell. Houses show a tendency towards irregularity, though the basic idea of the prolonged rectangle remains untouched.[73] The inhabited area lies high above the boundary of the settlement belonging to group A. This settlement apparently was also destroyed by violence, as we can see from the groups of vases found in burnt houses.[74] We must, however, be very careful, since the two larger groups contain some vases of a definitely religious character. This will be discussed below. Immediately after the destruction the new settlement was built; its house-floor level appears to be at a depth of 6·0 m. After the destruction of this settlement there seems to be a gap in occupation, witnessed by a poverty or complete absence in period C of these forms which were already flourishing in period B 2. We know, however, several sites in the Serbian Banat, such as Potporanj, near Vršac, whose material shows a continuous development from period B 2 to C.[75]

With regard to pottery, period B 2 shows a perfection unattained in the succeeding period. Rippled and polished designs are made with a careful, sure hand (Fig. 6. 2, 8–9). The clay is very well levigated, and approaches that of Greek Minyan vases. In this period the rectilinear system of rippled decoration is abandoned. At the same time the potters ceased to decorate only the shoulders of vases. Thus the interior of bowls is often decorated with arc or spiral motives.[76] The cherry-red polished wares reach their climax in this period. Slipped ware is limited to stemmed bowls (Fig. 6. 9). New are simple painted stripe-ornaments, radiating from the rim.[77] These are in a diluted colour applied before firing. Likewise new is the use of black lustrous paint. This technique is rare.[78] Towards the end of this period the ribbon-ornaments incised on amphorae and face-lids show a preference for lines of dots made with a cog-wheel or comb stamp, but this technique reaches its climax only during the next period. When the ribbons are made freehand as before, they are characteristically filled with dots in line likewise. This kind of decoration is now applied to other vases as well. It is significant that the spiral occurs for the first time in this technique (Fig. 6. 10). As regards the development of shapes, the triple division now reaches its climax and the individual parts begin to be formed independently in accordance with the decoration. Thus the rims of bowls are often concave in section, shoulders of pots are rounded or, in the case of vases with two members, concave (Fig. 6. 1–2, 5, 7). Small biconical amphorae now occur rather frequently,

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[73] *P. Vinča* II, pl. 58, fig. 210.

[74] *P. Vinča* IV, 36 ff. (∇ 7·05); 38 ff. (∇ 6·6); 43 ff. (∇ 6·5).

[75] F. Milleker, *Starinar* XIII (1938), 116 ff.

[76] *P. Vinča* IV, 54, fig. 73, 64, fig. 91; pl. 37, fig. 90, 92 *b–d*; M. Vasić, *PZ* II (1910), pl. 13, fig. 4.

[77] *P. Vinča* II, 21, pl. 19, figs. 35–9, 129.

[78] *P. Vinča* I, 51, fig. 103, pl. 23; 61, fig. 109, pl. 24; 73, fig. 127, pl. 28.

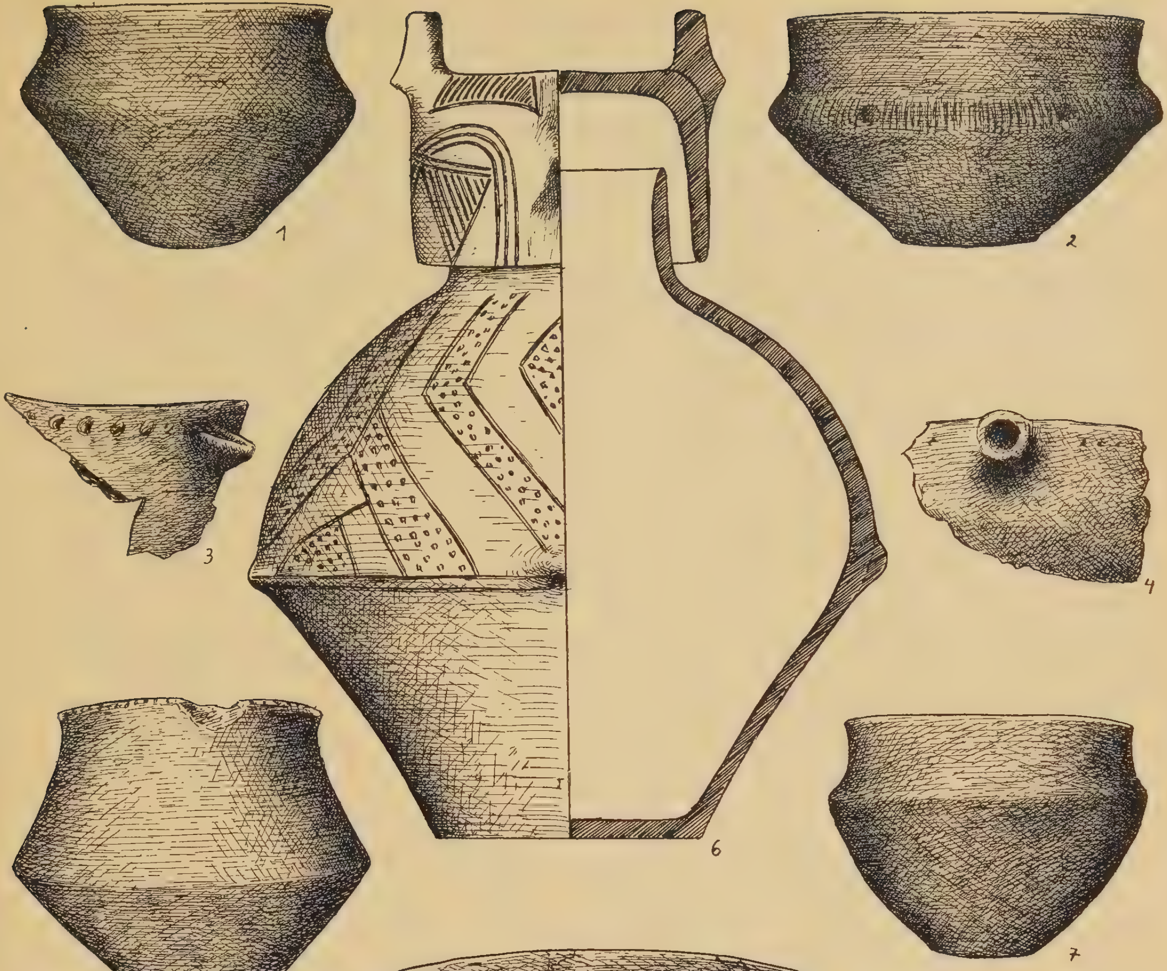
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Fig. 6.—Vinča B2.
From *Preistoriska Vinča* and Vulić and Grbić, *CVA Jugoslavie* III.

as well as amphorae with uptilted handle-stumps. Bottle-like vases, flat dishes, bellied amphorae (Fig. 6. 6) and flat plate-like lids are innovations (Fig. 6. 10). All of them bear an incised double spiral. Coarse domestic ware for the most part remains unchanged, but the shapes become a little flatter. Beside beaked jugs (Fig. 6. 3) we now often have ones with tubular spout (Fig. 6. 4). The individual parts of slipped stemmed bowls show a tendency—as with black polished bowls—to develop independently. The stem is solid, the foot-disk is flat and is regarded as an independent part of the vase (Fig. 6. 9). Beside these well made slipped specimens, worse pieces also occur, which may be considered of local manufacture.

The face lids of amphorae show no essential change. The horns, however, have become completely vertical, and there is no sign of a previous horizontal position (Fig. 6. 6). To this period belong the groups of anthropomorphic and zoomorphic vases, which now reach their technical climax. I mention a vase representing a human figure found in a house at 6·6 m. depth, a double-faced vase from the same place, a fragment of an anthropomorphic vase from 6·3 m., and a horned animal vase from 6·1 m.[79] Many fragments of such vases belong to this group, as also the ' Hyde Vase ', though it was found at a depth of 7·05 m.[80] The latter vase was found among a group whose forms belong mainly to period B 2. In idols the same tendency can be noted as with all other pottery. Quality continues to improve, but a schematic conception remains dominant. Some examples, which are perhaps imports, are especially well formed and made of ' Minyan ' clay. The eyes are modelled plastically, the face has a pentagonal form and looks like a mask fixed to a real face. The back of the head is often vertically perforated, as occurs also with arm-stumps. Unperforated examples have incised hair. Altars are unchanged. New are idols with modelled hands resting on the stomach. No cemeteries belonging to this period were found, but in the Potporanj settlement an urn-grave came to light. As, however, the settlement was founded in period B 2 and lasted into period C, there is no evidence that the graves belong to period B 2.[81] The stone industry on the whole remains unchanged. New are the celt-like hammers with a bored hole. There is much obsidian. We have reached the time of far-reaching trade relations.

Period C in Vinča comprises the levels from 5·80 m. to 4·50 m. depth. In Vinča there seems to have been an interval between the last settlement of period B 2 (at 6 m.) and the first one of period C at a depth of 5·40 m. This cannot be proved as a matter simply of stratification, because apparently there is no sterile level between, but I agree with F. Holste, who aptly put it: “ Die Entwicklung verläuft freilich nicht geradlinig, obwohl man überall bemerkt, dass die kleinen Randbildungen und weitausladenden Schultern (of the vases) der Stufe B den Ausgangspunkt bilden ”.[82] This slight interruption is traceable everywhere, and as we have a continuous development at Potporanj and other sites, this more distinct contrast between the two stages means in no way that something essentially new has been acquired. On the whole the development carries on continuously. Nothing has yet been published about the building of houses, though up to 1942 plans were preserved. One settlement-level seems to lie at a depth of 5·40 m. and another at 4·80 m.

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[79] *P. Vinča* I, 43, fig. 89; 53, fig. 105; pl. 23, fig. 103; 66, fig. 113; pl. 26, fig. 113 *b*.

[80] *Ibid.*, 60 f., pl. 24, fig. 109.

[81] F. Milleker, *Starinar* XIII (1938), 118 ff.

In pottery blackish-grey fabrics with rippled and polished decoration continue to be dominant. It is important that vases took a brick-red hue if they were exposed to a subsequent firing. The rippled designs are now made more distinctly, so that we can by now speak of fluted ware. Curvilinear designs occur more frequently (Fig. 7. 1, 6–7, 11).[83] Polished decoration is better and more systematically made. The red polished and red-slipped varieties of stemmed bowls are still to be observed, but they get more and more rare and towards the end of this period they disappear completely. The same happens to incised amphorae and face-lids, which have gone out of use by 4·5 m. depth. The incised decoration of vase is however not abandoned, but is transferred to other types of pottery. Ribbons are filled with comb or cog-wheel punctuations (Fig. 7. 14). Dimples were filled with incrustation matter. This decorative technique is especially characteristic for this period.[84] Moreover the occurrence of “ repetition motives ”, consisting of spirals and meanders, is typical. The necks of wide-mouthed vessels show a tendency to splay out to a funnel-like form (Fig. 7. 1, 5). In other cases, shoulders are concave (Fig. 7. 9). Everywhere a tendency towards S-profiles can be traced. Bottle-like vases still occur (Fig. 7. 11). The small biconical shoulder-amphorae reach their highest perfection.[85] Spouted vases are frequently found too (Fig. 7. 8). As regards coarse ware, besides flat dishes, the appearance of wide-mouthed storage vessels and amphorae (Fig. 7. 7) is important.[86] A biconical coarse storage vessel was used for a cremation burial at Potporanj. The old biconical cooking pots are, in a flatter form, produced without change.

As already mentioned, face-lids become very rare, and the old, widely adopted form is abandoned. Anthropomorphic and zoomorphic vases still

[82] F. Holste, *WPZ* XXVI (1939), 4.

[83] *P. Vinča* II, pl. 65, fig. 232; IV, 54, fig. 73; 98, fig. 158.

[84] *Ibid.*, pl. 67, figs. 231–4; pl. 68, figs. 235–7.

[85] *P. Vinča* IV, pl. 18, fig. 45*g*; pl. 34, figs. 80, 82, 83*a*; pl. 52, fig. 135; pl. 47, fig. 109.

[86] *P. Vinča* II, pl. 25, figs. 58–9; IV, pl. 48, fig. 113.

occur.[87] Of idols it is typical that the feet are always replaced by a pedestal (or a long skirt?), which is often separated from the body of the figurine by an incised stroke. Idols with hands resting on the stomach are frequent. Eyes are modelled plastically and are surrounded by incised lines. Crusted painting in white or red is, as before, often practised. Clothes are sometimes indicated by incised lines on the body. Simple types, whose head is not perforated, always have incised hair. In this period sitting idols and groups of mother and child appear for the first time, though some of these seem to belong still to period B 2. Here should be mentioned some marble idols, which belong either to period C or to B 2.[88]

The stone industry remains unchanged, though shoe-last celts predominate. Perforated axe-hammers occur frequently. For this period a sufficient quantity of copper, used for the manufacture of flat axes and axe-hammers, is reliably attested.[89] Obsidian becomes very rare and in the next period no longer occurs.

Period D comprises the levels between 4·5 m. and 2·5 m. depth, with two habitation levels at about 4·10 and 3·40 m. A complete plan of the excavated houses has not yet been published. Beside rectilinear houses, the first curvilinear ones occur, it appears, at a depth of 4·10; according to the published pictures, they are certainly attested at a level of 3·40.[90] We have houses with several rooms which had an apse-like room built close to a rectangular main room. In the houses horseshoe-shaped ovens were found, and M. Vasić believes that the houses were factories, presumably for the working of cinnabar. Such ovens had been used since the foundation of the settlement, as can be seen from the piece found at 8·20 m.[91]

The pottery industry of this time is best represented by the two great groups of vases found at a depth of 4·1 and 3·48 m. respectively.[92] Black polished ware with polished and fluted decoration continues to be the most frequent ware. Though vases of both groups are brick-red to-day, this colour is due to a subsequent fire to which the vase was exposed. The cross is frequently used as a motive of polished decoration inside bowls. In rare cases floral motives are used instead.[93] The fluted decoration grows broader, so that it gives the effect of ribbing. Curvilinear patterns are in use (Fig. 8. 8, 10). The slipped stemmed bowls and cherry-red ware no longer occur. Stamped ware with repetition motives becomes very rare, but the red and white "crusted ware" grows in importance (Fig. 8. 12),[94] reaching its climax

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[87] *P. Vinča* I, pl. 27, figs. 115–8.

[88] *P. Vinča* II, pl. 78, figs. 295–6.

[89] M. Grbić, *Pločnik, eine prähistorische Ansiedlung* (Beograd, 1929), 17, figs. 88–102; V. Fewkes, *BASPR* XII (1936), 53.

[90] *P. Vinča* I, pl. 6, fig. 18; pl. 8, fig. 20; IV, 74, fig. 98.

[91] *P. Vinča* I, 13, fig. 21.

[92] *P. Vinča* IV, 73 ff., 107 ff.

[93] *P. Vinča* II, pl. 71, fig. 244; pl. 72, fig. 245.

[94] *Ibid.*, 134 f., pl. 124, figs. 282–4.

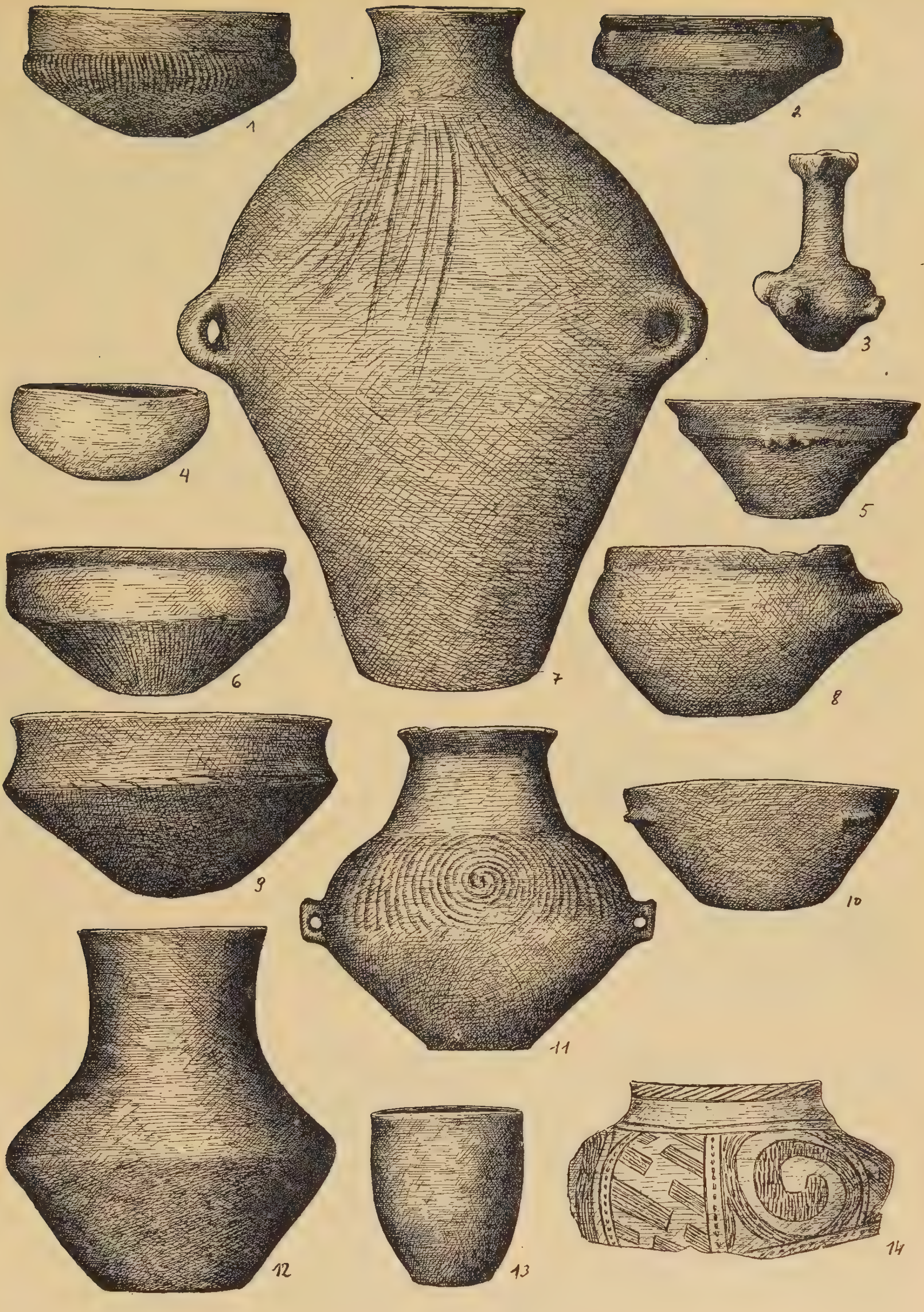
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Fig. 7.—Vinča C.
From *Preistoriska Vinča*.

at a depth of 3·00 m. Amphorae with face-lids are no longer found, but the technique of incised design is still practised. In bowls, necks and shoulders grow to an unprecedented size, so that for a time real funnel-bowls develop. Towards the end of this period shapes flatten, and bowls approach once again their original form without neck (Fig. 8. 1, 4–5, 7, 10). The small amphorae still have the same form as in the last period, though the shoulders are slightly more rounded. Spouted pots occur as before, but their profile also flattens (Fig. 8. 2). Besides flat dishes (Fig. 8. 9) and wide-mouthed storage vessels (Fig. 8. 6) we have now big three-handled amphorae.[95] Crater-like pots are new; they are four-handled. New also are box-shaped basins (Fig. 8. 11), tripods (Fig. 8. 8), though these seem to have existed even earlier, and clay funnels (Fig. 8. 3).[96]

The heads and bodies of figurines are now embellished all over with ornamental lines; ears and cheeks are perforated. They are richly painted with crusted red colour. Towards the end of the period, they are rather badly manufactured and look almost board-like. Kourotrophoi still occur in this period. Zoomorphic vases also still occur, but are rare.[97]

In the stone industry, we note a great falling off of obsidian. Perforated axe-hammers are usual, and 'shoe-last celts' and trapezoidal stone axes continue in use.

In this period the Vinča culture comes to its end, though there are still two occupation-levels at 2·30 and 1·60 m. depth. These two last levels Holste assigned to a period E.[98] The older level is largely influenced by the Baden culture, and the younger one seems to belong to the Kostolac culture, which the present writer has defined elsewhere.[99] As these two cultures have nothing to do with the real Vinča culture and, according to their material, belong mainly to Central Europe, we need not here pursue further the developments in Northern Serbia.

THE BUBANJ CULTURE OF CENTRAL SERBIA

In Central Serbia developments went another way. There the later stages of the Vinča culture, namely periods C and D, never developed. Towards the end of B 2, which is well developed at Gradac, Šetka, Župska and Pločnik,[100] development is cut off. A new culture is formed, which we have called the Bubanj culture.[101] On the site of Bubanj the strata of

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[95] *P. Vinča* IV, pl. 40, fig. 100*a*, *b*; pl. 61, figs. 170–1.

[96] *Ibid.*, pl. 43, figs. 174–5; pl. 65, figs. 183–4.

[97] *P. Vinča* II, pl. 94, fig. 356.

[98] F. Holste, *WPZ* XXVI (1939), 5, 14 f.

[99] V. Milojčić, *WPZ* XXX (1943), 51 ff.; 'Die Funde der Kostolacer-Kultur in der Sammlung des Vorg. Seminars in Marburg a.d. Lahn', *Festschrift G. von Merhart* (1946).

[100] M. Vasić, 'Gradac', *Glas. S-K.A.* LXXXVI (1911), 97 ff.; V. Fewkes, *BASPR* XII (1936), 60 f. (Setka). Župska, unpublished, Mus. Niš; M. Grbić, *Pločnik* (1929); Fewkes, *op. cit.*, 50 ff.

[101] V. Milojčić, *Das ältere Neolithikum in Serbien.*

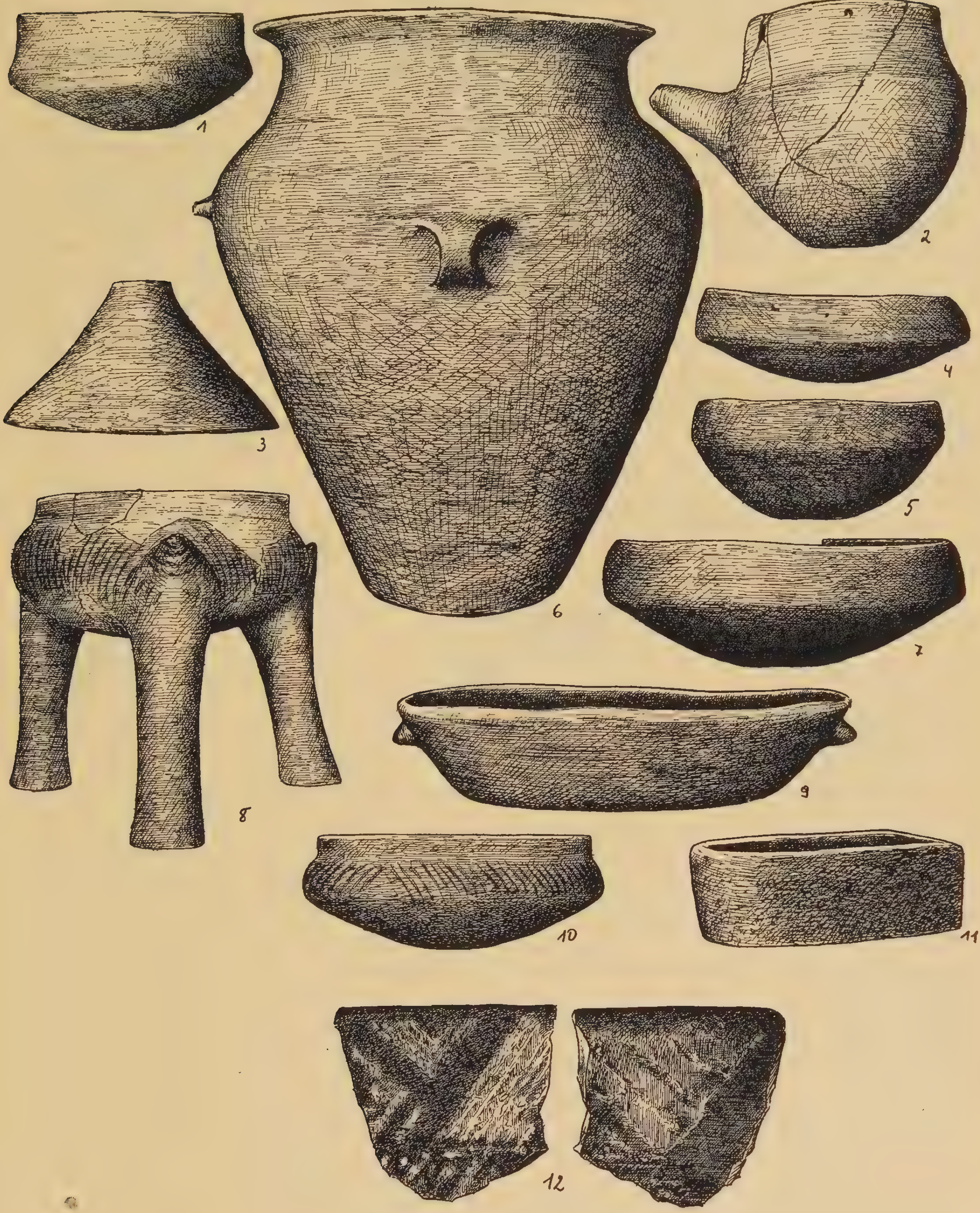
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FIG. 8.—VINČA D.
From *Preistoriska Vinča*.

this culture are about 3 m. thick, and many levels with several phases of development are noted. As the publication of this site was made in a world language and is commonly available, we believe it will be enough to add only a summary sketch here.[102]

Clear house-plans from this culture could not be obtained, but we appear to have rectangular houses with clay walls reinforced by posts, and trodden floors. We have also pits for utilitarian purposes (*bothroi*). We know nothing about the mode of burial. Pottery is mainly fired brownish-grey or black. Besides fluted decoration (Fig. 10. 5), we have on larger vases a technique which combines polished and painted designs in white and red, painted either before or after firing. The main motive consists of two spirals, painted one on each side of the bowl.[103] Besides bowls with an exaggerated lip (Fig. 10. 1), one-handled jugs often with cut-away mouth (Fig. 10. 14), cups and bowls are typical (Fig. 10. 4). We have also two-handled vases (Fig. 10. 5, 7, 13) and amphorae (Fig. 10. 10) with vertical lugs (Fig. 10. 9), jugs with spouts (Fig. 10. 12) and bellied vases, stand-rings and concave lids with handles in the hollowed top (Fig. 10. 3). Finally we have large pear-shaped amphorae with two or three handles and with plastic crescents on the shoulder (Fig. 10. 2). The flint industry is a blade industry; we have also stone axes. The bone industry is well developed. Besides the usual things, spoons and needles are carved.[104] Copper is known.

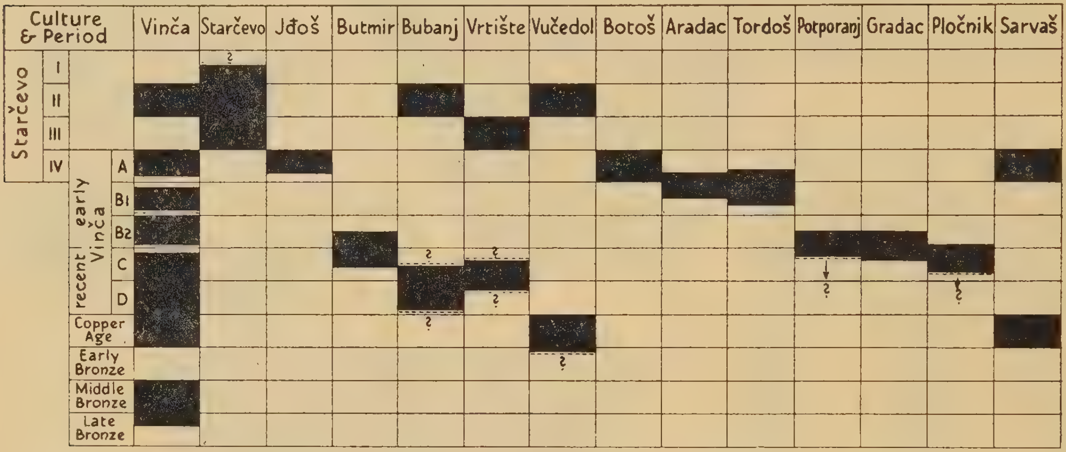

FIG. 9.—SYNCHRONISTIC TABLE OF SERBIAN SITES.

That this culture was contemporary with Vinča C and D is demonstrated by many facts. This question has been treated in detail elsewhere,[105] and so we only note here that at Pločnik and Gradac the forms of the Bubanj culture appear intermingled with those of the Vinča culture.[106] Moreover the typical Vinča idol of period C was found at Bubanj at a depth of 1·80 m.[107] Further, the two cultures show many common points which add weight to the facts set out here. In order to clarify the chronological relations of the main sites in Serbia, we add a chart (Fig. 9), whose explanation we have given elsewhere.[108]

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[102] A. Orssich-Slavetisch, 'Bubanj, eine vorgeschichtliche Ansiedlung bei Niš', *MPKW* IV (1940).

[103] N. Petkov, *Godišnik* (*Annuaire*) *Nat. Muzej Sofija* V (1926–31), 132, figs. 45–6; 143, fig. 60; J. H. Gaul, *BASPR* XVI (1948), pl. 45, 1–2.

[104] A. Orssich-Slavetich, *op. cit.*, pl. 3, figs. 3, 6–7, 9, 11; pl. 10, fig. 6.

External Relations of Serbian Neolithic Cultures

Having given a summary of the developments and relative chronological position of the late neolithic cultures from the earliest beginnings yet known until 1900 B.C.—the Baden culture is contemporary with the Middle Helladic culture in Greece [109]—we can proceed to the treatment of our real theme. Two points must be considered: first, the individual features of the culture; secondly, outside influences alien to the real culture, which are either taken over by natives or remain as unassimilated imports. Thus we must examine two topics: first, the different cultures themselves according to their origin, and secondly according to elements coming from abroad by way of imports or spiritual influences. In order to recognize the origin of a culture we must not of course indiscriminately apply all objects from all periods and groups, but must use primarily the finds from the earliest period, and only secondarily later objects as a confirmation of results already obtained. Imports and alien influences in general are rather of a chronological importance, and are of only secondary value in tracing the history of culture. This value they acquire only if a subsequent effect can be proved, and if they have provoked a change in the local form.

Search for the origin of the Starčevo culture has up to now seemed rather hopeless, as this culture is only newly discovered and the finds are scanty. Some facts, however, should be pointed out. The oldest barbotine ware with its designs produced by nail-impressions, pinching, incised lines, rough grooves and so on (Fig. 2. 1–3, 7) [110] does not appear to be isolated. It is foreign to the main areas of Danubian I *Bandkeramik*, Bohemia and Southern Germany, though some Hungarian sites of this culture have produced similar pieces.[111] These, however, are the areas where the two cultures meet, and these features and also the appearance of painted pottery in the early Bükk culture in Hungary [112] and in the later Danubian *Bandkeramik* of Bohemia [113] only go to prove that the two cultures are contemporary. Barbotine ware is lacking in the area of the Cucuteni-Tripolje culture, while the 'pre-Cucuteni' culture has quite another character. This is true also of the area of the lower Danube, where the Boian-A culture was dominant at this time. In the south the situation is entirely different. Pottery of this kind was found at the village of Servia in Macedonia in the oldest stratum, together with painted ware of the Thessalian type contemporary with Sesklo.[114] Farther south, in Thessaly, what we have called the 'pre-Sesklo' culture has produced related objects, though this class is a little different and seems to have lost its influence in the time of the Sesklo culture.[115] In South-eastern regions, we find this ware at some sites in Bulgaria, around Sofia, together with painted pottery related to our painted Starčevo ware.[116] Farther south this sort of pottery came to light on a site Banja near Karlovo in Suva Planina, again together with painted pottery.[117] This ware was widespread in Western Bulgaria also. Examples are the vases from Deve-Bargan near Trnovo-Seimen, Tell Mečkur, where a painted vase occurs, and the cave of Morovica near Teteven.[118] In the West similar material has been found in Leukas [119] and in Southern Italy.[120] In every case, the barbotine ware occurred in company with painted ware. Here affinities are still clearly visible, but if we go farther they get blurred and we have only loose connections, which lead rather to other types of these regions than to the groups typical of Serbia. Thus O. Menghin had already connected the punch-dotted group of Thessaly with the Molfetta pottery, and the latter again with the African Redeyef ware.[121] In the other direction, such connections exist also with Mersin in Southern Asia Minor and with Syria.[122] These relations cannot yet be explained. It is however certain that this kind of pottery, though of varying age in different regions, forms a basis on which alone the painted varieties could subsequently originate. It seems possible that we have here a Mesolithic tradition, spread over all of these regions, and formed on an Upper Palaeolithic basis, which one could expect to be Aurignacian.

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[105] V. Milojčić, *Chronologie der jüngeren Steinzeit.*

[106] M. Vasić, 'Gradac', *Glas. S-K.A.* LXXXVI (1911); M. Grbić, *Pločnik* (1929) = Vulić and Grbić, *CVA Yugoslavie* III, pl. 3.

[107] A. Orssich-Slavetich, *op. cit.*, 32, 42, pl. 3, fig. 1.

[108] Milojčić, *Das ältere Neolithikum in Serbien.*

[109] *Id., Chronologie der jüngeren Steinzeit.*

[110] Fewkes, Goldman, Ehrich, *BASPR* IX (1933), pl. 8; Vulić and Grbić, *CVA Jugoslavie* III, pl. 1, 2–6; Fewkes, *Proc. Am. Phil. Soc.* LXXVIII (1937), 387 ff.

[111] F. Tompa, *BRGK* XXIV–XXV (1934–5), 32, pl. 7, figs. 16, 19.

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[112] F. Tompa, *Die Bandkeramik in Ungarn* (1929), 51, pl. 46. 1.

[113] J. A. Jira, *Mannus* III (1911), 234 ff., figs. 8–11, 14, 20–1; pl. 28–30; E. Simek, *WPZ* I (1914), 32 f.

[114] *PMac*, 63 f., fig. 5.

[115] K. Grundmann, *Ath. Mitt.* LVII (1932), Beil. 20.

[116] N. Petkov, *Godišnik* (*Annuaire*) *Plovdiv* 1928–9, 125 ff. Barbotine ware not yet published. See also J. H. Gaul, *BASPR* XVI (1948), 14 ff.

[117] Unpublished. Settlements mentioned by Mikov, *Stations et Trouvailles préhistoriques en Bulgarie* (1933), 75; cf. Gaul, *op. cit.*, 42 f.

[118] V. Mikov, *op. cit.*, 80, fig. 40; 86, fig. 45; 27, fig. 7.

[119] W. Dörpfeld, *Alt-Ithaka* (1927), Beil. 56, 83, 84.

[120] A. Mosso, *Mon. Ant.* XX (1910), 11, figs. 3–6; 51, figs. 31–58; R. B. K. Stevenson, *Proc. Prehist. Soc.* XIII (1947), 8 ff., pl. 1, 1-12.

[121] O. Menghin, *Weltgesch. der Steinzeit* (1931), 337, 401; R. Vaufrey, *Ipek* 1938, 10 ff., pll. 7, 8, 10.

[122] J. Garstang, *AJA* XLVII (1943), 1 ff.; C. Schaeffer, *Ugaritica* (1939), 4 f., fig. 2; E. Schmidt, *Tell-Halaf* I (1943), pl. 88, figs. 1, 3, 9, 15–8.

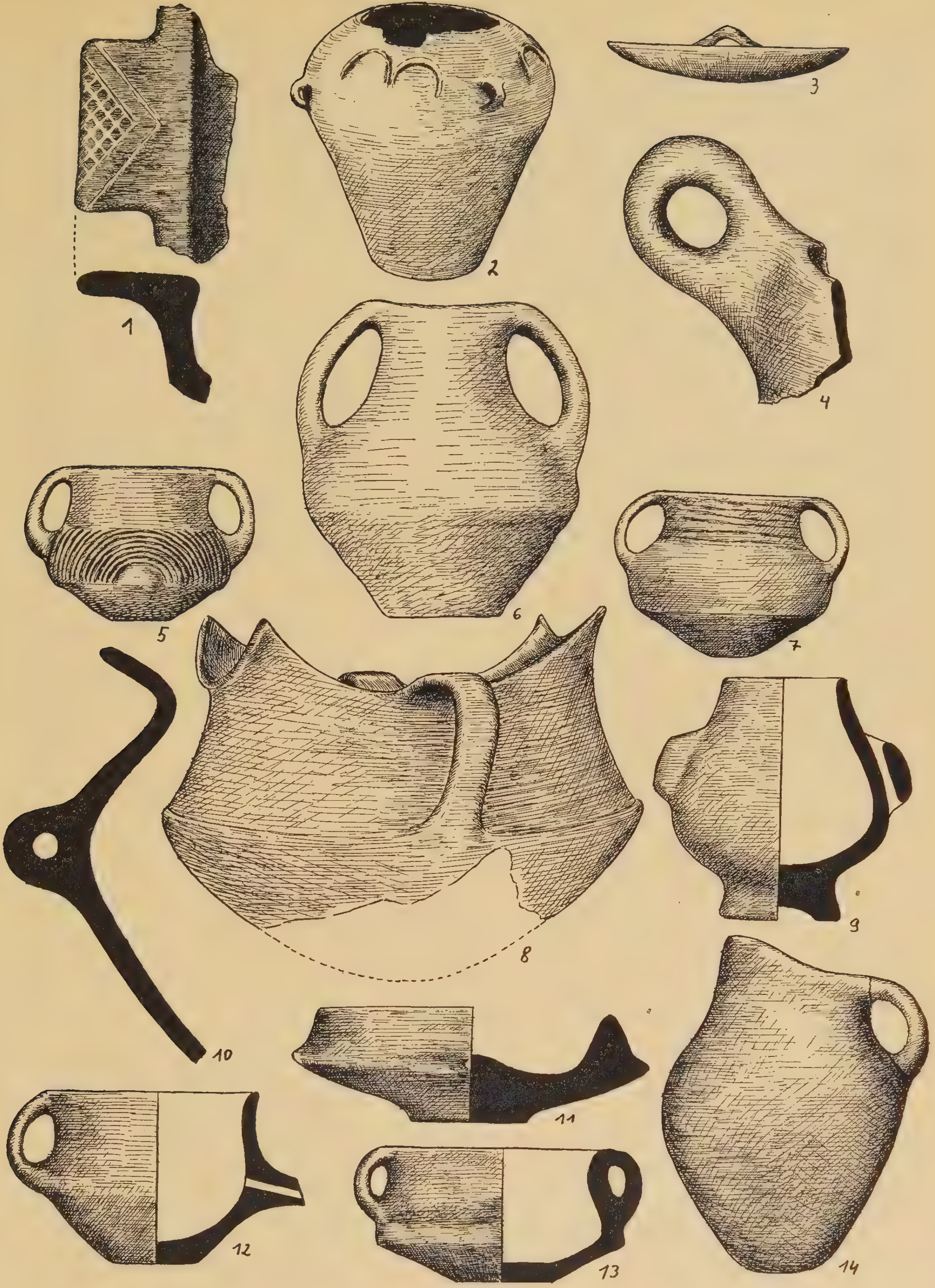
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Fig. 10.—Bubanj Culture.

From A. Orssich-Slavetich, *MPKW* IV (1940); Vulić and Grbić, *CVA Jugoslavie* III; 8 from F. Holste's sketch-book in Marburg.

Connections of the more recent Starčevo periods with the South are so numerous and varied, though there is no evidence of imports, that we are compelled to divide the material into groups. In the first place we shall treat pottery shapes, secondly decoration, thirdly religious objects, fourthly burial rites, and finally the miscellaneous material. Among shapes, no doubt the hemispherical bowl is the simplest form that occurs in the Starčevo culture (Fig. 2. 14).[123] In general this is a very common form, but in the area of the Vinča culture it is unknown. In Northern Serbia it is frequent in Danubian *Bandkeramik* settlements[124] and it is well known in Macedonia, Thessaly and Greece.[125] In the same regions we have the related form of hemispherical bowl with flat bottom, but the hemispherical bowl with solid flat foot-stand (Fig. 2. 18)[126] does not occur farther north. The hemispherical goblet with a ring-stem (Fig. 2. 15)[127] is a form which occurs only south of Serbia and is especially characteristic of the Sesklo culture.[128] Another typical form is the globular amphora with slightly detached foot[129] or ring-stem (Fig. 2. 17, 19).[130] These forms are lacking in the adjacent northern regions, and occur only in the south.[131] To this group also belong more or less globular storage vessels with detached neck (Fig. 2. 16), which also occur in the south.[132] Further features are the vertically bored lugs (Fig. 2. 17), which are found for the first time in Starčevo II, and ribbon handles (Fig. 2. 12), which apparently begin during period II or III. It is significant that both kinds of handles have gone out of use by the time of the early Vinča culture. Ribbon handles remained completely unknown in the Northern regions at this time, and lugs, which are found for the first time in Starčevo II, are only later taken over. In Macedonia, Thessaly and Greece, however, they are equally frequent.[133] In Italy also they are not unknown on pots.[134]

If we turn from pottery shapes, which represent only various transformations of the globular form, to the painted decoration, we shall again find strong relations with the South. Pleasure in bright designs with interplay of colours is unknown to Central Europe. There we have only severe, deeply incised patterns which permit no effect given by combination of colours, though sometimes contrasts between unshadowed surface and shaded incised furrows are recognizable. The Starčevo culture, however, shows during the period of its climax a wonderfully coherent association of a lively coloured background with colourful designs which seem inexhaustible in their combinations. This is especially true of the third period. In this respect the Starčevo culture cannot be separated from Macedonia, Thessaly and Greece. Judged by its conception of decoration, the Starčevo culture is a sister of the cultures of the Southern Balkans, and nothing is more confusing than an attempt to connect it with the Central European *Bandkeramik* because of the presence of spiral motives, as has been done with the Dimini and Cucuteni cultures. A decorative motive, which can well be transferred, does not prove the genetic derivation of one culture from another. If this reasoning is applied in other cases, the result will be nonsense. According to this theory, the northern Bronze Age must have been created by the Danubians, and the numerous spiral motives of Mesopotamian seals and of Egyptian reliefs must be derived from the potters of the *Bandkeramik*. These and other such inferences will be total misconceptions. Therefore we emphatically refuse to acknowledge a connection between *Bandkeramik* on one side and the Starčevo-Dimini-Cucuteni culture on the other. The Boian-A culture is likewise not connected with *Bandkeramik* nor with the Starčevo culture.[135] All these cultures are entirely different and the sole connection is given by their type of social and economic life, by the fact that they are contemporary, and by a decorative motive, which was by no means always a native element in these cultures. At least in the sphere of painted pottery in the Balkans the spiral motive was a secondary feature.

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[123] Fewkes, Goldman, Ehrich, *BASPR* IX (1933), pl. 8, fig. 8.

[124] F. Tompa, *BRGK* XXIV–XXV (1934–5), pl. 7, fig. 7, 11; 8, fig. 5; 9, figs. 1, 4. 5 ff.; A. Stocky, *La Bohème préhistorique* (1929), pll. 8, 9, 11 ff.

[125] *PMac*, 137, no. 11; *DS*, 160, fig. 70; E. Kunze, *Orchomenos* II, 25, pl. 2. 1.

[126] A. Orssich-Slavetich, *MPKW* IV (1940), 23, fig. 18.

[127] Fewkes, Goldman, Ehrich, *BASPR* IX (1933), pl. 13; Vulić and Grbić, *CVA Yugoslavie* III, pl. 1. 1; Orssich-Slavetich, *op. cit.*, 22, fig. 16.

[128] *PMac*, 133, no. 3; 137, no. 6; *DS*, 162 ff., figs. 72–5; Kunze, *Orchomenos* II, 27, figs. 20–1; E. Holmberg, *Asea* (1944), pl. 3*a*, *b*; C. W. Blegen, *Prosymna* (1937), pl. 151, fig. 620; U. Rellini, *Ceramica dipinta* (1934), 34, fig. 18.

[129] A. Orssich-Slavetich, *op. cit.*, 23, fig. 17; Vulić and Grbić, *CVA Yugoslavie* III, pl. 1. 7; Fewkes, Goldman, Ehrich, *BASPR* IX (1933), pl. 8. 4.

[130] Fewkes, Goldman, Ehrich, *loc. cit.*, pl. 8. 1, 2, 6; Vulić and Grbić, *loc. cit.*, pl. 1. 4.

[131] *PMac*, 137, no. 9, 10; *DS*, 181, figs. 83, 85; *PT*, 89, fig. 42; 198, fig. 140; Kunze, *Orchomenos* II, 27, fig. 22; A. Mosso, *Mon. Ant.* XX (1910), 51 ff., figs. 31–3.

[132] *P. Vinča* IV, figs. 1, 2; A. Orssich-Slavetich, *op. cit.*, 21, fig. 15; *PT*, 29, figs. 7, 8; G. Sotiriadhis, *Eph. Arch.* 1908, 67, fig. 2.

[133] *PMac*, 137, figs. 8, 9, 12; *PT*, 87, figs. 40, 48 ff.; Kunze, *Orchomenos* II, 27, fig. 22.

[134] A. Mosso, *Mon. Ant.* XX (1910), 38, fig. 36.

If we now consider the painted ware from a technical point of view, we shall notice that during the second and third period the monochrome, red-slipped variety is of the greatest importance. Technically this ware is hard to tell from A1 ware in Thessaly, Greece and Macedonia.[136] In the second period there is a red-slipped, white-painted variety corresponding to A3α ware of Thessaly[137] and, particularly in the regions of Bulgaria round Sofia and Karlovo, there is also a white-slipped, red painted ware.[138] This last variety corresponds in technique to the Thessalian A3β ware.[139] We have also a red-slipped variety with dark brown, almost black, painted decoration. This also has its Thessalian counterpart in the Sesklo period.[140] A fourth variety is a rare black-slipped ware, known to us from the Sesklo period in Thessaly as A5α,[141] which is often erroneously considered the ancestor of the later black-polished, monochrome Γ1α.[142] In the third period red-slipped ware with black, curvi-spiraliform patterns, corresponding to B3α in Thessaly, is most important.[143] Polychrome painting also now occurs on the red-slipped ware B3β in Thessaly[144] and also a light yellow ware without slip with dark paint (B3ε) and polychrome (B3ζ).[145] Finally there is a dark brown variety, whose colour seems due to a wash of lustrous paint.[146] From all these instances it may be seen that painted Starčevo vases differ only slightly from Thessalian ware, but that there is no complete identity. If we now try to analyse the motives, we shall find many details similar to Bulgarian, Macedonian, Thessalian and Greek motives. The conception however is different in all regions. Each area combines the details in its particular way. The simplest motive is vibrating radial lines (Fig. 2. 4, 6); pieces with this decoration were found at Magula near Pyrgos in Boeotia.[147] The most frequent motives are cross-hatched triangles and rectangles (Fig. 2. 5, 8–9). These also appear in Macedonia and Greece.[148] A characteristic feature is bands composed of thin parallel lines bordered by thick lines (Fig. 2. 10). Such bands, though differently arranged, are also typical of the later period of the Sesklo culture in Greece.[149] The chequer pattern also appears in both Greece and Serbia.[150]

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[135] J. Nestor, *BRGK* XXII (1932), 54 ff.; D. Rosetti, *Sapaturile dela Vidra, Publ. Muz. Municip. Bucuresti* 1934, 40 ff.

[136] *PT*, 13; *PMac*, 63; Kunze, *Orchomenos* II, 26 ff.; Holmberg, *Asea*, 33 ff.

[137] *PT*, 14.

[138] N. Petkov, *Godišnik Plovdiv* 1928–9, 185 ff. The finds from Karlovo have not yet been published (Museum of Plovdiv). See J. H. Gaul, *BASPR* XVI (1948), 12 ff., pl. 1–12; 17, 1–2.

[139] *PT*, 14.

[140] *Ibid.*, 16 (B3δ); 114, fig. 63; 142; 146, fig. 90.

If we try to analyse the motives of the third period, we cannot find a single direct connection with Thessalian patterns, though there are plenty of curvilinear and spiraliform patterns in this group. ‘ Repeating ’ patterns and the meander are typical in Thessaly, though there is doubtless some common tendency in the liveliness and variety of patterns. In Macedonia, however, we find closer parallels, though they occur later. Painted ware from Olynthus especially nearly approaches our Starčevo ware, and close connections appear to exist here.[151] It should be mentioned that none of the settlements corresponding to our Starčevo III and the early Dimini period have been found in Macedonia, though they existed, as proved by the excavations at Polystylo.[152] Thus the lack of parallels in the south is due merely to our defective knowledge of the Southern Balkans. Here we must turn to the finds already referred to at Banja near Karlovo, where there are vases of the Starčevo II—Sesklo type, with white-on-red and red-on-yellow painted decoration.[153] To judge by the stage of development in technique one might have expected rectilinear decoration but, on the contrary, curvilinear decoration is found almost without exception; this might well be a preliminary stage of our Starčevo III. Thus it is possible that the curvilinear motives originate in the Eastern region of the area of painted pottery in the Western Balkans (influenced by Boian-A culture?) and that from that region they were brought to the West peacefully or by migration.

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[141] *PT*, 15.

[142] Kunze, *Orchomenos* II, 9 ff.; K. Grundmann, *Ath. Mitt.* LVII (1932), 109 ff., 123.

[143] *PT*, 16.

[144] *Ibid.*

[145] *Ibid.*, 17.

[146] Kunze, *Orchomenos* II, 31 ff.; *PMac*, 73; Holmberg, *Asea*, 42 ff.

[147] Kunze, *Orchomenos* II, pl. 19. 5 *i*.

[148] *Ibid.*, pl. 25. 2; *PMac*, 136, fig. 2*a*, *g*.

[149] Kunze, *op. cit.*, pl. 15. 1; Holmberg, *Asea*, 52, fig. 54; *PT*, 93 ff., figs. 45 ff.

[150] *DS*, pl. 20. 4; 21. 1 ff.

[151] G. Mylonas, *Olynthus* I (1929), fig. 66; *PMac*, 161, fig. 32.

[152] Mylonas and Bakalakes, *Praktika* 1938, 103 ff.

If we now turn to religious objects, we find that clay idols play the most important part. In comparison with the thousands of figurines in the Vinča-Gumelnitza culture, idols are rare in the Starčevo culture. Therefore we shall here use Hungarian pieces also as evidence, in order to supplement the material.[154] We have exclusively female figurines with pronounced steatopygy and breasts, long necks and undivided heads, from which hooked noses protrude. Eyes are expressed by slanting cuts and thus " look Chinese ". Mouths also are sometimes indicated. Almost in every case long hair has been drawn with long strokes. In the older Danubian and Boian-A culture idols seem to have been unknown,[155] but in Macedonia, Thessaly and Greece down to the Peloponnese we find close parallels in the older local culture of the Sesklo period.[156] Other figures are cattle, or rather goats, which again are found in Greece and Thessaly.[157] Not to be separated from religious objects are vases with reliefs[158] of either women with heavily stressed vulva or he-goats, which are closely connected with the female figures if they appear on the same vase. Of such reliefs, only one piece is known to me from Macedonia and Greece. It is interesting that they are found together with closely corresponding idols in the sphere of the Tell Halaf culture,[159] where, as we have seen, the barbotine ware also has excellent parallels outside Europe. These parallels are doubtless suggestive of a connection, though there is no evidence of any other relation between Western Asia and the Balkans at this time. Further, we have four-footed altars in contrast to the three-footed ones of the Vinča culture, which also have their Greek and

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[153] Unpublished material in Museum of Plovdiv.

[154] Starčevo figurines from Serbia: *P. Vinča* III pl. 9, fig. 36; L. Nadlacki, *Arh. Moravski Glasnik* (Niš) III (1936), 6 ff.; V. Fewkes, *BASPR* XII (1936), 59, pl. 5 *c*, 12; A. Orssich-Slavetich, *MPKW* IV (1940), pl. V, fig. 5; F. Milleker, *Starinar* XIII (1938), 118 ff. Figurines from Hungary: J. Banner, *Das Tisza-Maros-Körös-Gebiet* (1942), pl. 3, figs. 23, 25, 29; pl. 15, fig. 3; pl. 16, figs. 7, 8; pl. 18, figs. 1–5.

[155] W. Buttler, *Der Donauländische und der westische Kulturkreis* (1938), 31 f.; V. Christescu, *Dacia* II (1925), 275; D. Rosetti, *Sapaturile della Vidra, Publ. Muz. Municip. Bucaresti* (1934).

[156] *PMac*, 139, fig. 7; 165, fig. 35 *k-n*; *DS*, 299 ff., figs. 224, 226, 227; pl. 32. 1–6; pl. 33. 3–7; pl. 34. 8; *PT*, 54, fig. 29; 68, fig. 35; 123 ff., figs. 71–7; 147, fig. 91; 169, figs. 114–5; 200, fig. 141; L. Franz, *Ipek* 1932–3, 39 ff., pll. 9–10; E. Holmberg, *Asea*, 115, fig. 111. 6–9.

[157] *DS*, pl. 34. 10–11; pl. 36. 8; *PT*, 128, fig. 77*b*; L. Franz, *Ipek* 1932–3, pl. 9, fig. 11; Holmberg, *Asea*, 115, fig. 111. 10–11.

[158] J. Banner, *Das Tisza-Maros-Körös-Gebiet* (1942), pl. 6; 7, fig. 2; 27, fig. 2; *P. Vinča* I, pl. 19, fig. 94; 21, fig. 97; II, pl. 66, figs. 227–230; K. Willvonseder, *Germania* XXIV (1940), 1 ff.

[159] *DS*, 296, pl. 34. 9; F. von Oppenheim, *Tell-Halaf* I (1943), 101, pl. 106, fig. 6.

Thessalian counterparts.[160] Finally the numerous stamp-seals should be mentioned, though it is not quite clear what they were used for.[161]

For the Starčevo-Körös culture multiple interments seems to be typical. At Vinča, a ' chamber-tomb with dromos ' was found, in which nine corpses were buried.[162] In Hungary four skeletons and in another case three skeletons were found in one grave.[163] Often single skeletons were found, mainly in refuse-pits. Similar cases are found in Greece, where we have the first type in the artificial cave-tomb of Prosymna [164] and the second type in all other instances.[165] In both cases there seem to have been no objects added, if the potsherds are rightly not to be regarded as such.

Among the miscellaneous finds I should like to mention the bone spoons, which occur from Hungary down to Thessaly.[166] The flint industry on the whole is related to a tradition of Aurignacian forms, in contrast to that of the Danubian I culture, for which L. Zotz has suggested a similar relationship to Magdalenian.[167] Moreover it should be mentioned that in the Starčevo culture shoe-last celts with convex back are rare, and play no important part. Far more frequent are triangular celts with asymmetrically sloped back, and trapezoids with high backs (and the edges rounded off), which have often been mistaken for shoe-last celts.

If we now turn again to the Vinča culture we shall see that everything points to the south.[168] As the material remains of the Vinča culture are more abundant than those of the Starčevo culture, we can deal with them under the same headings, and proceed to treat the pottery shapes. Like those of the Starčevo culture, the pottery shapes of the Vinča culture owe nothing to Central European forms. Similarly they are completely independent of the preceding Starčevo culture. They thus represent a new repertory of shapes introduced from abroad, and as a matter of fact all shapes of the Vinča culture have their exact counterparts in Macedonia, Thessaly and Greece. The pottery of the oldest period, A, of the Vinča culture is divided between a biconical form (Fig. 4. 1, 4) and one with rounded outlines (Fig. 4. 3, 5). These basic forms we find in Macedonia,[169] but in Thessaly there seems to be a tendency towards more angular shapes.[170] To avoid naming a boundless variety of corresponding shapes I should like to mention only some of the more typical examples, and cannot set out to exhaust all the possibilities of parallels. Typical of Vinča A are biconical, wide-mouthed bowls with scarcely indicated rim (Fig. 4. 1, 4). These reappear frequently in Macedonia, Thessaly and Greece.[171] The same is true of the biconical pots with slightly incurved shoulders (Fig. 6. 7; 7. 9).[172] An especially conspicuous form is the wide-mouthed bowl with reinforced shoulder and cylindrical neck-rim (Fig. 6. 2).[173] In the same group belong bellied pots with cylindrical necks.[174] Wide-mouthed funnel-bowls with thick shoulders and splayed funnel-rim appear in Vinča and Thessaly (Fig. 7. 5).[175] There are also fruit-stands (Fig. 4. 2),[176] tripod-vases (Fig. 8. 8)[177] and biconical cooking-pots with ledge-like lugs (Fig. 5. 8, 10).[178] These are almost all the forms we have among the more elaborate Vinča ware. There remain the amphorae with face-lids (Fig. 6. 6) and large storage vessels with faces on the neck. These we shall treat more carefully in conjunction with religious objects.

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[160] *PT*, 27, fig. 5; 89, fig. 42 *d*; 107, fig. 57 *g*.

[161] J. Banner, *op. cit.*, pll. 15–16; *DS*, 340, figs. 270–3; *PT*, 149, fig. 93.

[162] *P. Vinča* II, 9 ff., pll. 5–17.

[163] J. Banner, *op. cit.*, 25, pl. 19, fig. 1.

[164] C. W. Blegen, *Prosymna* (1937), 25 f., pll. 4–5, figs. 27–31.

[165] J. L. Angel, *AJA* XLIX (1945), 252 ff.

[166] A. Orssich-Slavetich, *MPKW* IV (1940), 27, pl. 1, fig. 2; *DS*, pl. 46. 8; *PT*, 51, fig. 27*g*.

[167] L. Zotz, *WPZ* XXVIII (1941), 1 ff.

[168] O. Menghin, *Weltgeschichte der Steinzeit* (1931), 335.

[169] *PMac*, 141 ff.

[170] K. Grundmann, *Ath, Mitt.* LVII (1932), Beil. 24–5.

If we now turn to decorative technique, we must stress first that at this time there is to be observed a general decline in decoration. Colours are replaced by a greyish-black, impersonal dullness. The bearers of the Vinča culture do not delight in gay colours, on the contrary there is a tendency to avoid them wherever possible. Colour is used only for painting idols, altars and vases which were not in daily use. In every line there can be observed an attitude towards colour which was unknown in the Starčevo culture. It seems doubtful whether this can be explained as due simply to the development of metal vases, though this factor certainly played a large part in the disappearance of painted decoration in general.[179] The intention to make the surface of the vase shine by polishing must also be regarded as in some sense decorative. The technique of firing the surface black or red is utterly unknown in Central Europe. (The occurrence of this technique in the painted pottery of Moravia shows, together with other facts, that it is peculiar to the movement which also created the Vinča culture). In Macedonia,[180] Thessaly,[181] Greece[182] and farther east,[183] however, this technique is frequent. It occurs particularly often in Troy I, but there it is only a legacy from an older period, whose remains have not yet been fully inquired into (Besika and Kum Tepe).[184] Also no doubt south-eastern is the neolithic lustrous paint.[185] Sherds of vases made in this technique were found by R. R. Schmidt in his excavations in the lowest strata of Bapska and Sarvaš,[186] which are contemporary with Vinča A–B 1. Connected with the technique just mentioned is that of polished decoration found in Macedonia, Thessaly, Greece, the Islands, Asia Minor and Syria.[187] In the latter country it is especially old, from which we can infer the direction from which it came to Serbia.[188] On black-polished vases, the polished decoration is often enhanced by rippled and ribbed patterns. This also has been found only in the South.[189] The technique of crusted painting (after firing) with red, white, yellow or black was practised, though rarely, from the earliest times. This technique is not native in Central Europe either; it is, however, used in Macedonia, Thessaly, Greece and the Islands.[190] Finally, the technique of black-topped ware should be mentioned. It has a distinctively southern origin.[191]

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[171] *PMac*, 144, no. 44–9, 66–8 ff.; Grundmann, *op. cit.*, Beil. 24. 1–2.

[172] *PMac*, 144, no. 52, 79–84, 117; Grundmann, *op. cit.*, Beil. 25. 4; *PT*, 108, fig. 58*e*.

[173] *PMac*, 144, no. 41–2, 50–1; Grundmann, *op. cit.*, Beil. 24. 3.

[174] *PMac*, 143, no. 39–40, 110–1; Grundmann, *op. cit.*, Beil. 25. 6; *PT*, 47, fig. 23*c*; 152, fig. 96*a–e*; Kunze, *Orchomenos* II, pl. 1. 1.

[175] *DS*. 278, fig. 210.

[176] *PMac*, 153, no. 115, 145; *PT*, 98, fig. 50*c*, *e*, *g*; 109, fig. 59*e–f*.

[177] *PMac*, 162, no. 161; *PT*, 108, fig. 58; S. Weinberg, *Hesperia* VI (1937), 507, fig. 28; W. Lamb, *Thermi* (1936), 81, fig. 29.

[178] *PMac*, 151, no. 100, 152–4, 158; *PT*, 156, fig. 103*f*.

[179] F. Schachermeyr, *Klio* XXXII (1939), 254 f.

[180] *PMac*, 67 f.

[181] *PT*, 17 (Γ1α).

[182] Kunze, *Orchomenos* II, 9 ff.; Holmberg, *Asea*, 48 ff.; Childe, *BSA* XXXVII (1940), 28 ff.

[183] H. Frankfort, *Studies in Early Pottery* II (1927), 63 ff.; K. Bittel, *Präh. Forschungen in Klein-Asien* (1934), 30 f.

If the connections already quoted were not sufficient to prove that the Vinča culture is the product of South-eastern influences, the cult-objects would be complete proof. Not a single feature of this religious world has its foundation in Central Europe. The frequent occurrence of idols, whose use is not yet completely clear, implies a new type whose special feature is a strong systematization. Characteristic of these figures are a clearly detached triangular face, back-tilted head and angularly incised eyes. This type is found in Macedonia, and more frequently in Thessaly and Thermi.[192] Here a new tendency is represented, which has little to do with the naturalism of the sphere of painted pottery, and obviously results from an entirely different attitude towards the deity. To me it seems as if the gods of the Starčevo culture owe their natural shape to direct imagination, while the figures made by the Vinča people are only symbols of deities seen in a trance, that is to say in a not natural state. In some way this kind of idol must be connected also with the numerous anthropomorphic and zoomorphic vases at Vinča and in the related Gumelnitza culture. It need hardly be stressed that the region where these vases originated and spread is the South-East, and is remote from contact with Danubian I culture. Thus we find such vases in Macedonia, Thessaly and Greece, and especially closely corresponding pieces in Crete.[193] A tendency towards zoomorphic and anthropomorphic shapes seems characteristic of Asia Minor.[194] In Macedonia we find an inclination to adorn vases with small heads or figures instead of handles,[195] which is very frequent also in Serbia. Likewise the curious three-footed altars (Fig. 5. 14) with incised patterns and crusted painting often occur in the Southern Balkans.[196] Vases with faces and amphorae with face-lids will be spoken of only briefly here as we intend to treat the whole of this subject in detail elsewhere. There is no evidence for precise parallels, but connections with other objects no doubt exist, though the amphorae themselves are of a different kind from those found at Troy.[197] Trojan vases have turned-up arm-stumps, which closely resemble the small Vinča amphorae with turned-up handles.[198] Vasić at first connected these vases with the lids,[199] but excavation has shown that the lids belong to amphorae with incised decoration.[200] On the other hand a similar find from Crete (Hagios Nikolaos) supports the reconstruction suggested by Vasić.[201] Amphorae with incised decoration were also found in the settlement on the Protesilaos mound.[202]

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[184] W. Lamb, *PZ* XXIII (1932), 124 ff., figs. 13–4.

[185] *PMac*, 73; Holmberg, *Asea*, 42f.

[186] R. R. Schmidt, *Die Burg Vučedol.*

[187] *PMac*, 71, n. 8; W. Lamb, *PZ* XXIII (1932), 126–8; S. Weinberg, *Hesperia* VI (1937), 511 f.

[188] V. Christian, *Altertumskunde des Zweistromlandes* (1939), 94, pl. 27. 1.

[189] *PMac*, 69; *PT*, 17 (Γ1α3).

[190] *PMac*, 74; *PT*, 17 (Γ1δ); S. Weinberg, *Hesperia* VI (1937), 512; R. Heidenreich, *Ath. Mitt.* LXI–LXII (1935–6), 125 ff.

[191] G. Mylonas, *Olynthus* I (1929), 38 f.; Mylonas and Bakalakes, *Praktika* 1938, 110 f. (Polystylo); unpublished material in Thessaloniki Museum from Komotini.

[192] *PMac*, 139, fig. 71; *DS*, 300, fig. 225, pl. 34. 1–4, 6–7, 35. 1–3, 6–8; 36. 1–6; *PT*, 49, fig. 25, 26 n; 83; 163, fig. 109*b*, *e–f*, *h*, *k*; fig. 110.

We can say nothing about burial rites, as the cemeteries of this time in Macedonia, Thessaly, Greece and Western Asia Minor are unknown to us. Likewise I shall not give a detailed report on the other objects from the Vinča culture, as they can in no way cast new light on the results already gained; they would only add to the evidence of connections. Two groups of objects should however be mentioned: the marble figurines [203] and marble palettes.[204] The white marble of which they are made proves that they were imported. The process of manufacture cannot be clearly recognized, but the objects must have come from the South. The rectangular form of certain palettes suggests a connection with areas connected with the Cyclades (or Southern Bulgaria?).[205]

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[193] *PT*, 69; 147 ff., fig. 91*b*; J. Nestor, *BRGK* XXII (1932), pl. 9. 1, 5; D. Rosetti, *Public. Municip. Muzei Bucureşti* I (1934), 34, pll. 1–3; E. Caliu, *Milcovia* (1933); V. Mikov, *Izvest. Bulg. Arch. Inst.* VIII (1934), 199, fig. 133; H. Schliemann, *Ilion* (1886), fig. 487; R. Seager, *Mochlos* (1912), 64, fig. 32–4; A. Evans, *Palace of Minos* I (1921), 116, fig. 84; Pendlebury and Money-Coutts, *BSA* XXXVI (1935–6), 94, pl. 13. 1001; S. Xanthoudides, *Vaulted Tombs of Mesara* (1924), 39 ff., pl. 2; 19. Zoomorphic vases: *PMac*, 55, 66 n. 7, 76, 115, 140, 162; D. Rosetti, *op. cit.*, 44, fig. 48–9; V. Mikov, *Godišnak Mus. Sofia* V (1926–31), 108, fig. 28*a*; Seure and Degrand, *BCH* XXX (1906), 359 ff., fig. 1–2; G. Mylonas, *Olynthus* I (1929), figs. 35–7; H. Goldman, *Eutresis* (1931), pl. 7. 1; R. Seager, *Mochlos* (1912), 60, figs. 28–9; Xanthoudides, *op. cit.*, pl. 2. 7, 20, 28–30, 38, 51; H. Schroller, *Stein- und Kupferzeit Siebenbürgens* (1933), pl. 7, fig. 8, 13; K. Willvonseder, *WPZ* XXVIII (1941), 38 ff.; *id.*, *Germania* XXIX (1940, 1 ff.); W. Dehn, *Trierer Zeitschrift* XIV (1939), 3 ff.

[194] S. Fuchs, *Die griech. Fundgruppen* (1937), 49 ff.

[195] *PMac*, 72; 146, fig. 13; 157, fig. 24.

[196] *Ibid.*, 161, no. 148; Seure and Degrand, *BCH* XXX (1906), 368, fig. 5.

[197] H. Schmidt, *Schliemanns Sammlung Troianischer Altertümer* (1902), 14, nos. 302–361; 47 ff., nos. 1033–1095; 79 ff., nos. 1830–1862.

[198] *P. Vinča* IV, pl. 27, fig. 45*f*; pl. 20, fig. 56*e*; pl. 32, fig. 75*d*.

[199] M. Vasić, *Glas S-K.A.* LXX (1906).

[200] *P. Vinča* II, 65, fig. 102.

[201] A. Evans, *Palace of Minos* I (1921), 61, fig. 24.

[202] R. Demangel, *Le Tumulus dit de Protésilaos* (1926), 20, figs. 20–1.

[203] *P. Vinča* II, pl. 78, figs. 295–6; *PMac*, 10; 78; 164, fig. 34*f–j*.

[204] *P. Vinča* I, pl. 15, figs. 57–63.

[205] *Ibid.*, pl. 15, fig. 61; N. Aberg, *Bronze- und eisenzeitliche Chronologie* IV (1933), 68, figs. 114–5.

If we turn now to the third of the groups of neolithic cultures in Serbia we must observe that the Bubanj culture is closely related to cultures in Western Bulgaria and South-western Rumania: the Gnilane culture in Bulgaria and the Salcutza culture in Rumania.[206] In reality these cultures already belong, from an Aegean point of view, to the Early Bronze Age and to the group which comprises Early Helladic, Early Macedonian, Early Troadic and Early Minoan. From a Central European point of view, however, these cultures in the Northern Balkans still belong to the latest Stone Age. All of them are earlier than the Baden culture and the contemporary groups of the Northern Megalithic-civilization. It follows, by an irritating anomaly of nomenclature, that these are at one time assigned to the Neolithic Age, at another to the Age of Metals. The terminology depends on the author; if he looks at these cultures from Central Europe, they are Neolithic, if he looks from the Aegean area, they belong to the Early Bronze Age.

One single glance at the shapes of this culture should be sufficient to prove its Aegean character. Thus askoi are frequent in the Bubanj-Gnilane-Salcutza cultures;[207] in the Early Macedonian and Helladic cultures they are of paramount importance. Plastic crescents occur on an askos from Vinča, as also on a sherd of an askos-jug and on the famous Hyde vase,[208] and also on amphorae at Bubanj (Fig. 10. 2),[209] and there are others in Thessaly, Thermi and Troy.[210] The chronological position of such vases is assured as Early Bronze Age by the occurrence of these ornaments on the askos and the askos-jug from Vinča. The small stemmed vase with vertical lug (Fig. 10. 9) is an exact imitation of the identical vases from Thermi and Troy.[211] The same is true of the spouted pot (Fig. 10. 12).[212] Moreover we have jugs with sloping neck (Fig. 10. 14); this is, with askoi and sauce-boats, a basic form of the Aegean culture in the Early Bronze Age. Two-handled sauce-boats also occur (Fig. 10. 8), and are closely related with the corresponding Trojan gold vessels.[213] Besides these main types we have many common shapes such as two-handled bowls and pots (Fig. 10. 5–7, 13),[214] amphorae (Fig. 10. 10),[215] one-handled jugs and pots (Fig. 10.

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[206] N. Petkov, *Godišnik* (*Annuaire*) *Muz. Sofia* V (1926–31), 115 ff.; D. Berciu, *Archeologia Preistorica a Olteniei* (Craiova, 1939), 49–72; J. H. Gaul, *BASPR* XVI (1948), 208 ff.; V. Mikov, *Raskopki i proučvanija* (Fouilles et recherches) I (1948), 26 ff.

[207] Berciu, *ibid.*, 51, fig. 46*g*; 55, figs. 50–1; M. Mitic, *Starinar* 1908, 185, fig. 1; M. Vasić, *Glas. S-K.A.* LXXXVI (1907), fig. 45. 1 (askos-handle).

[208] *P. Vinča* I, pl. 24, fig. 109; pl. 28, fig. 127.

[209] A. Orssich-Slavetich, *MPKW* IV (1940), pl. 2. 1.

[210] *DS*, 262, figs. 169–70; W. Lamb, *Thermi* (1936), 82, fig. 29*a*; H. Schmidt, *Schliemanns Sammlung*, 142, no. 2806.

[211] Lamb, *Thermi*, pl. 10, fig. 336, 481; H. Schmidt, *op. cit.*, 229, nos. 5859–61.

[212] Lamb, *op. cit.*, pl. 43, fig. 42; Schmidt, *op. cit.*, 18, fig. 391; 28, fig. 555.

[213] Schmidt, *op. cit.*, 230, no. 5863.

[214] *PMac*, 186, no. 268–272 ff.; Lamb, *op. cit.*, 82, fig. 29. 1–2; pl. 35, fig. 551.

[215] A. Orssich-Slavetich, *MPKW* IV (1940), 39, fig. 23. 6; *P. Vinča* IV, pl. 40, fig. 100; pl. 61, figs. 170–1; *PMac*, 171, no. 167; 175, no. 208.

4),[216] bowls with incurved and emphasized rim (Fig. 10. 1),[217] concave lids with handles in the hollow top (Fig. 10. 3).[218] All of these shapes are possible only in virtue of the Aegean development, as shown by the above mentioned relations. In the Central Europe of this period they would be impossible. These few but important examples may suffice to show the origin of the Bubanj-Gnilane-Salcutza cultures. We must not forget, however, that native elements also played a part, as may be seen from the painted and spiraliform patterns.

With regard to religion, it must be noted that this culture shows exactly the same disinclination to form idols as the Macedonian and Helladic cultures in the South. The only figurine found at Bubanj was imported from the area where the late Vinča culture was at its highest stage.[219] Compared with the Vinča culture, all other plastic objects also appear to be rare.

We know nothing about burials, but we assume that they were located outside the settlements, as always during this period. Among miscellaneous finds, axes should be mentioned; they likewise appear for the first time in this cultural movement in the South.[220] We have also clay spindle-whorls, which are often ornamented.[221] These objects are unknown in the older Vinča culture.

SUMMARY

It can now be clearly seen that the Serbian regions were in their development in the latest Stone Age closely connected with Macedonia and Greece culturally and ethnically. Moreover Serbia seems indirectly connected with South-western Asia. One might say that the Serbian regions were but a province of the great Hither-Asiatic cultural community. It is not yet clear if the bearers of the pre-Sesklo-Starčevo I culture were newcomers from another region, or if the interrelations spring from a common origin. We must not forget that in the Balkans (as in South-western Asia) the Aurignacian culture seems to have lasted throughout the later stages of the Upper Palaeolithic Age,[222] and may be supposed to have engendered a Mesolithic tradition. Equally obscure is the source of painting on vases and of the Hither-Asiatic religious ideology; should we attribute it to migration, transplantation, or rather to an independent development from a common basis? In Serbia no objects have been found which might be identified as imports from Greece, to say nothing of Hither-Asia; parallels however are so exact that a close connection cannot be doubted.

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[216] M. Vasić, *Glas. S-K.A.* LXX (1906), fig. 39; Vulić and Grbić, *CVA Yugoslavie* III, pl. 8. 9; pl. 9. 9, 12; *PMac*, 168, nos. 171–5, 183–4, 193–6 ff.

[217] *PMac*, 166, fig. 36.

[218] W. Lamb, *op. cit.*, pl. 39.

[219] A. Orssich-Slavetich, *op. cit.*, pl. 3. 1.

[220] *Ibid.*, 35; *PMac*, 86, 199, fig. 64; Bittel and Otto, *Demirci-Hüyük* (1939), 32 f.

[221] A. Orssich-Slavetich, *op. cit.*, 35; *PMac*, 87, 203, fig. 67.

[222] D. A. E. Garrod, *BASPR* XV (1940), 46 ff.; R. Stampfuss, *Mannus* XXXIV (1942), 132 ff.

When treating of the black-polished ware of type A at Vinča, we spoke often of the Danubian invaders or Danubian influences[223] that have been recognized in Macedonia, Thessaly and Greece. In opposition to this view, it must be stressed that the Vinča A culture is not based on any preparative development in Serbia. As such preparative developments are also lacking in Central Europe, it is completely wrong to include parallels with Vinča among any 'Danubian elements' that may be claimed as appearing in Macedonia, Thessaly and Greece. The bearers of the Vinča culture must have come to Serbia from the South. They must have penetrated the Serbian-Slavonian and Thessalian-Greek areas simultaneously, as is shown by pottery shapes.[224] Decorative elements of this earliest Vinča period we find in the more recent late neolithic stratum of Servia (Macedonia).[225] At Vinča, however, all the main types of the earlier period in Servia are missing. Hence it may be inferred that the users of black-polished ware settled in Macedonia earlier than in Serbia. This conclusion is reinforced by the fact that fragments of burnished decorated and rippled ware were found in Dimini strata in Thessaly.[226] Since nothing is known for certain about the culture which existed in Asia Minor before Troy I, and since it is very possible that here, as also on the Islands of the Aegean, there was a culture of the Vinča type, we are inclined to believe that the Vinča culture originated in Asia Minor.[227]

Further treatment of the Bubanj-Gnilane-Salcutza culture is unnecessary. This culture is so closely linked with the Macedonian developments of the Early Bronze Age that Heurtley's observations on the origin of Macedonian forms apply equally to our culture.[228]

It is a matter of course that these South-eastern influences did not come to a halt in Serbia, but spread to Central Europe as well. At the time of the Starčevo culture the borders run to the West of Osijek (Esseg) on the Drave and to the North of the Körös river on the Tisza.[229] So far settlements of the Starčevo culture had spread. This boundary was, however, penetrated by certain influences, as shown by features in the Bükk and Tisza culture. The settlement-area of the Vinča culture is also larger than the Serbian area. The most remote sites are Tordos and the related sites on the Maros and Sremski Karlovci on the Danube in the West. The origin of the Lengyel culture, which is quite different from the real Tisza culture, the Moravian painted-ware culture, Jordansmühl and related cultures is based on influences

[223] *PMac*, 116 ff.; K. Grundmann, *Ath. Mitt.* LVII (1932), 112 f.

[224] Discussed by V. Milojčić, *Chronologie der jüngeren Steinzeit Mittel- und Südosteuropas*.

[225] *PMac*, 77.

[226] *PT*, 102, 114, fig. 63 (Γ1α2 and Γ1α3).

[227] W. Lamb, *PZ* XXIII (1932), 124 ff.; R. Heidenreich, *Ath. Mitt.* LX–LXI (1935–6), 125 ff.; R. J. Braidwood, *A Synoptic Description, Human Origins* (*Univ. of Chicago Select Readings* II, 1945), 30 ff.

[228] *PMac*, 118 ff.; Heurtley and Hutchinson, *BSA* XXVII (1926), 56 ff.; Heurtley and Radford, *BSA* XXIX (1928), 117 ff.

[229] J. Banner, *Tisza-Maros-Körös-Gebiet* (1942), 14 ff.; Kutzian Ida, *A Körös-Kultura* (*Diss. Pannonicae* II, no. 23, 1944), 156 f.

from the Vinča culture, and via the Vinča culture on Asia Minor. The last wave with the Bubanj-Gnilane-Salcutza cultures was decisive for the development of the Toszeg A culture of the Hungarian Early Bronze Age. It is impossible here to document these statements.

The chronological position of individual phases in Serbia can only be alluded to here, as we have treated this question in detail elsewhere.[230] The Starčevo culture is on the whole contemporary with the Sesklo-Dimini culture-sequence, Vinča A and B with the era of black-polished pottery in Thessaly and Greece. Vinča B 2 is contemporary with the Early Helladic period, as imitations of Early Helladic show. The transition from Early to Middle Helladic happened during the period of the Baden culture in Central Europe. With this summary and the chronological table (Fig. 11) we think we may conclude our essay.

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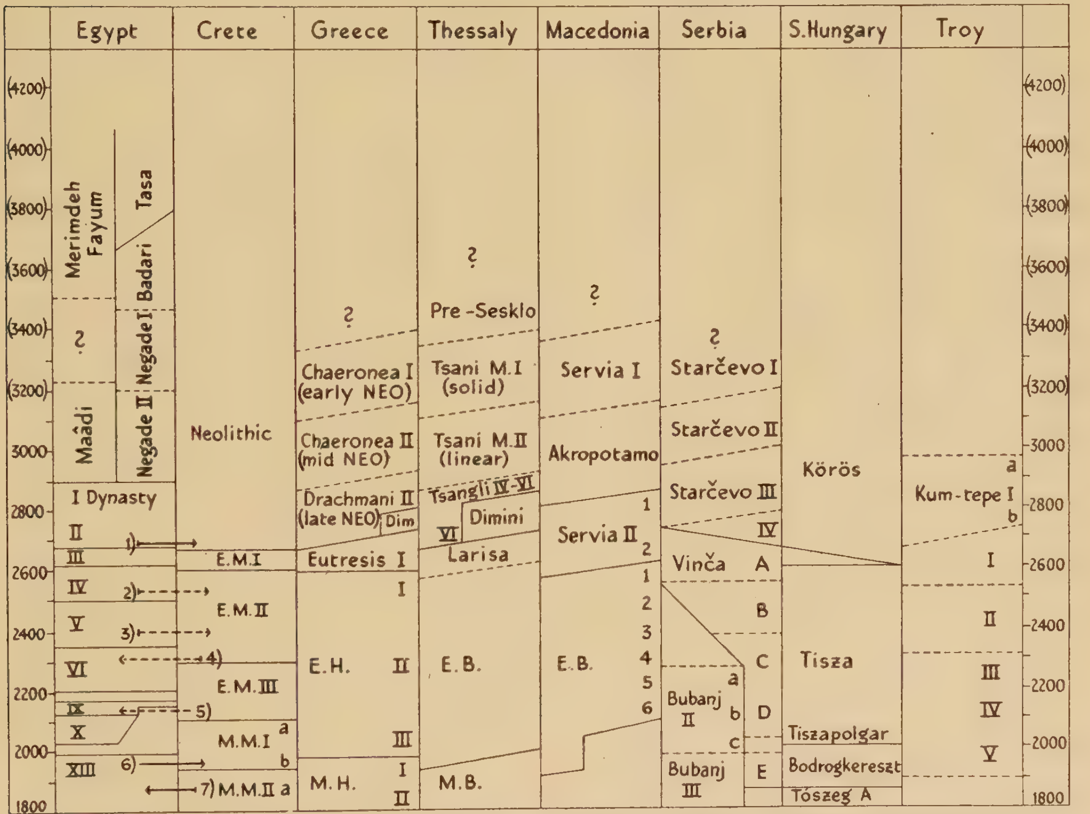
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Merimdeh
Fayum
Tasa
Badari
Negade I
Negade II
Maâdi
I Dynasty
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7) M.M.II a
Neolithic
E.M.I
E.M.II
E.M.III
M.M.I a b
Chaeronea I (early NEO)
Chaeronea II (mid NEO)
Drachmani II (late NEO)
Dim
Eutresis I
E.H. I II III
M.H. I II
Pre-Sesklo
Tsani M.I (solid)
Tsani M.II (linear)
Tsangli IV-VI
Dimini
VI
Larisa
E.B.
M.B.
Servia I
Akropotamo
Servia II 1 2
E.B. 1 2 3 4 5 6
Starčevo I
Starčevo II
Starčevo III
IV
Vinča A B C D E
Bubanj II a b c
Bubanj III
Körös
Tisza
Tiszapolgar
Bodrogkereszt
Töszeg A
Kum-tepe I a b
I
II
III
IV
V
?

1-3. stone vases. 4. stamp seals. 5. spiral motives. 6. scarabs. 7. M.M.IIa. potsherds in Harageh, Abydos etc.

FIG. 11.—CHRONOLOGICAL TABLE.[230a]

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[230] V. Milojčić, *Chronologie der jüngeren Steinzeit Mittel- und Südosteuropas.*
[230a] See n. 52*a* on p. 268.

APPENDIX

AEGEAN CHRONOLOGY OF THE FOURTH AND THIRD MILLENNIA

Any attempt to date the individual stages of development in the Aegean area and hence more widely in the Balkans and Central Europe must necessarily proceed from the established chronological data of Egypt and Mesopotamia. Only in these areas do historical sources reach so far back as the turn of the fourth millennium. What lies beyond can only be determined through comparative stratigraphy as a matter of relative chronology. The so-called low Egyptian chronology was established by Eduard Meyer; but, as research in recent years has shown, even Meyer's dates are manifestly too high.[231] During the war Dr. H. Stock, lecturer at the University of Munich, succeeded, on the basis of the Egyptian lists of nomarchs, in showing clearly that during the combined duration of the IX and X Dynasties in one nome only five nomarchs ruled. In other words, the gap between VIII and XI Dynasties is to be filled with the period of rule of these five men, so that the long interval which is commonly assumed is reduced to some fifty years. Considering these facts, and the substantial shortening of the duration of the I–V Dynasties, H. Stock arrives at the following low chronology for Egypt: I–II Dyn., 2900–2675; III Dyn., 2675–2620; IV/V Dyn., 2620–2360; VI Dyn., 2360–2200; VIII Dyn., 2200–2180; IX Dyn., 2180–2115; X Dyn., 2115–2044; XI Dyn., 2136–1994; XII Dyn., 1994–1781.[232]

In the meantime Mesopotamian chronology has also suffered a reduction, reflected clearly in the works of S. Smith,[233] A. Ungnad,[234] A. Poebel,[235] W. F. Albright[236] and E. F. Weidner.[237] It appears to me that the thesis of Smith, Ungnad and Albright stands nearer to the truth, for the finds from the graves and town-strata of Ras Shamra do not permit the assumption of any long interval between Amenemhet III and IV (1850–1792–1777) and Hammurabi.[238] So we arrive at 1792–1750 for Hammurabi and 1894–1595 for the whole dynasty, according to Sidney Smith. It may be emphasized that A. Ungnad came completely independently to exactly the same conclusions during the war. Reckoning out the remaining dates, one gets the following result: Jemdet Nasr, 3100–2859; archaic period (Mesilin), older,

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[231] E. Meyer, *Die älteste Chronologie Babyloniens, Assyriens und Ägyptens* (1925); A. Scharff, *Grundzüge der ägyptischen Vorgeschichte* (1928), 49 ff.; *OLZ* XXXI (1928), 73 ff.; *Hist. Zeit.* CLXI (1941), 20 ff.

[232] H. Stock, "Die erste Zwischenzeit", *Analecta Orientalis* 31 (Rome, 1949), in the press.

[233] S. Smith, *Alalakh and Chronology* (1940).

[234] A. Ungnad, *WPZ* XXX (1943), 109 ff.

[235] A. Poebel, *JNES* I (1942), 247 ff., 460 ff.

[236] W. F. Albright, *BASOR* LXXVII (1940), 25 ff.; IC (1945), 10 ff.

[237] E. F. Weidner, *AfO* XIV (1944), 362 ff.

[238] C. Schaeffer, *Stratigraphie comparée* (1948), 30.

2850–2700, recent, 2700–2550; Early dynastic period, 2550–2378 (Dynasty of Lagash, Royal Graves at Ur, 2540–2370); Kingdom of Akkad, 2378–2182 (Sarru-kin, 2378–2324, Naram-Sin, 2301–2246); Dynasty of Guti, 2237–2113; Fifth Dynasty of Uruk, 2112–2006; Third Dynasty of Ur, 2127–2016; First Dynasty of Isin, 2055–1880; Kingdom of Amurru, 1894–1595, with Hammurabi 1792–1750.

It is important to observe that these two chronological systems cross twice and thereby clearly show their reliability. Products of the late Jemdet Nasr period meet in Syria and Palestine (Tell Judeideh, Megiddo, Byblos, etc.) with products of I Dynasty Egypt.[239] Thus it is established that the Jemdet Nasr period lasted until 2900 and that the I Dynasty is inaugurated by this time. The second point of contact is offered by the Ras Shamra finds already mentioned. From this it is evident that the two chronological systems have a further support in comparative stratigraphy.

From these two independent chronological systems one can on the basis of comparative stratigraphy determine the dates of Aegean development, not indeed in decades but fairly exactly. The point of departure has long been the relations between Egypt and Crete and through Crete to the Greek mainland. Two points in these are decisive. First the well-known finds of M.M. IIa pottery at Kahun, Abydos and Harageh, of the time from Sesostris II (1906–1888) to Amenemhet III (1849–1801).[240] The circumstances of the finds show that the beginning of M.M. IIa lies somewhat before 1906. Otherwise completely developed M.M. IIa pottery could not be found in the strata at Kahun of the time of Sesostris II (1906–1888). The finds from Ras Shamra appear to support this dating. During the last two years of excavation (1938–9) there were found there M.M. IIa sherds together with objects of the time of Sesostris II and Amenemhet III; so from this side also it is assured that M.M. IIa was already established by the beginning of the nineteenth century.[241] In view of all these considerations, we reach the conclusion that M.M. IIa began between 1950 and 1925.

A second certain point is the appearance of Egyptian stone vases in the sub-neolithic strata at Knossos.[242] The study of Egyptian stone vases has been substantially advanced by G. Reisner and G. Brunton.[243] In his study of the vases from Crete Reisner comes to the conclusion that the development of their types took place during the rule of the last Pharaoh of the II Dynasty (Khasekhemui), reached its highest point during the III Dynasty, and came to an end in the time of the IV Dynasty. This means that the vases found in Crete cannot have been manufactured before 2700 and therefore that E.M. I cannot be set before 2700. In view of the consideration that the vases were not buried immediately and also that those which found their way to Crete are probably not the earliest of their kind, it is likely that E.M. I began just later, i.e. *c.* 2650–2600.

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[239] H. Frankfort, *American Journal of Semitic Languages* LVIII (1941), 355 ff.; H. Kantor, *JNES* I (1942), 198, n. 141.

[240] J. D. S. Pendlebury, *The Archaeology of Crete* (1939), 144 f.

[241] Schaeffer, *op. cit.*, 16 ff.

[242] Pendlebury, *op. cit.*, 41 f.

[243] G. Reisner, *Antiquity* V (1931), 200 ff.; G. Brunton, *Mostagedda* (1937).

Between these two fairly firm points lies the whole E.M. development. The native Cretan stone vases with their Egyptian shapes argue that E.M. II is to be equated approximately with the IV and V Egyptian Dynasties, and so put between 2600 and 2300.[244] The stamp-seals, the appearance of the spiral in Egypt and of Egyptian scarabs in Crete, support this proposed dating of the Cretan periods.[245] The plan of the mutual relationships given in Fig. 11 may make the question clearer.

From Crete, it can be shown on the basis of correspondence of shapes and technique of manufacture that the beginning of E.H. I cannot be put before the beginning of E.M. II, that is not before 2600.[246] This can be substantially reinforced on the ground of stratigraphical observations at Aegina.[247] There in the same horizon E.H. II–III vases and imported E.M. III–M.M. I vases are found together. Therefore E.H. I began certainly during the E.M. II period. Below this stratum at Aegina is a level without finds (gap in settlement) and below this a stratum with richer finds. These consist of fragments of vases decorated with neolithic *Urfirnis* or burnished decoration, that is, connected on one hand with late neolithic Greek finds (so-called "Danubian level" which stratigraphically immediately precedes E.H. I) [248] and on the other hand with E.M. I (Pyrgos ware) [249] and ultimately with Cretan sub-neolithic. Thus it is assured on the basis of the Egyptian chronology that E.H. I cannot lie before 2600. The question of the end of the Early Helladic culture is sufficiently clear and it may be assumed that it took place at the latest about 1950.

One can link the early development of Crete also with Mesopotamian chronology. The known Cretan finds of Mesopotamian objects confirm the dating here established and need not be specially treated here.[250] It is more significant that the Pyrgos finds and the late neolithic finds from Phaistos show very close relationship to the finds from Tigani on Samos.[251] The objects from Samos correspond in technique of manufacture, shapes and

[244] Pendlebury, *op. cit.*, 74 ff.

[245] F. Matz, *Gnomon* XVI (1940), 151 f.

[246] H. Frankfort, *Studies in Early Pottery* II (1927), 113 ff.

[247] G. Welter, *Arch. Anz.* 1937, 24 f.; *Aigina* (1938), 8 ff.

[248] L. Walker-Kosmopulos, *The Prehistoric Inhabitation of Corinth* (1948), 2 f., 48 ff.; S. Weinberg, *Hesperia* VI (1937), 515 ff.

[249] Pendlebury, *op. cit.*, 49.

[250] *Ibid.*, 87, 90, 98, 121; S. Smith, *AJA* XLIX (1945), 14 ff.

[251] R. Heidenreich, *Ath. Mitt.* LX–LXI (1935–6), 147 ff.; L. Pernier, *Il Palazzo di Festos* (1935), figs. 43–47; Xanthoudides, *Arch. Delt.* 1918, 136 ff.

decoration rather to the finds from Phaistos. It is particularly significant that the Tigani finds do not know glaze-paint, which is so characteristic of a part of the Pyrgos finds. Although there are in Tigani some imported objects which appear to belong to E.M. II, the bulk of the finds are roughly contemporary with Cretan subneolithic.[252] Attention must be drawn to the fact that the Tigani finds do not come from a uniform culture-level but from the earth that was brought here from somewhere else to level the surface of the settlement, as at Orchomenos (Weinberg has overlooked this). Heidenreich, who worked through the finds, recognized three stages of development, which can in part be established stratigraphically also.[253] It appears that the last stage is roughly contemporary with Pyrgos and perhaps lasted into E.M. II, the second is certainly contemporary with Cretan late neolithic, the first stage is not yet determinable.

In the meantime the American excavations in the Troad show that another culture flourished there before Troy I. On Kum Tepe at least three levels (Ia, b, c) could be distinguished. Ic is contemporary with Troy I, but Ia and b yielded objects which seem identical with Tigani II and III[254] (cf. the related earlier finds from Bos Höyük, W. Lamb, *PZ* 1932). Therefore we are compelled, in the light of relations through Crete, to date Troy I certainly after 2700 B.C. The finds from Troy and Tigani permit a good contact with Mesopotamian chronology. In this the results of the excavations at Mersin[255] and Tell Judeideh[256] play a great part. If we compare the stratigraphical-chronological series of Troy, Kum Tepe and Samos with that of Mersin and Tell Judeideh, we recognize a surprising agreement in the succession of certain periods and can so establish certain firm connections. In Mersin XII and Tell Judeideh XI a long development of painted pottery is unexpectedly replaced by a monochrome, black polished ware, which is completely foreign to previous developments in these areas. The finds from these levels show strong connections with Alişar I and Alaça Höyük IV on the one side, and Tigani and Kum Tepe Ia on the other. Exactly as on the tells of Mersin and Judeideh, so also in Tigani there appear black polished pottery, white paint, white incrustation, pedestalled bowls, ledge-like lugs, absence of ribbon-handles, etc. This suffices to show that Mersin XII and Tell Judeideh XI are contemporary with Tigani II. It must further be stressed that in the older strata at Kum Tepe pedestalled bowls of the Alişar I type were found.[257] So we have a closed circle, whereby it is demonstrated first through Tigani (Samos) and secondly through Alişar I that this Kum Tepe stratum is contemporary with Mersin XII and Tell Judeideh XI. The dating of Mersin XII and Tell Judeideh XI is assured by the observation that in the lower part of this stratum at Mersin imported Jemdet Nasr pottery is found, and in Tell Judeideh XI early dynastic Mesopotamian seals were found, thus giving a dating between 2900 and 2700. It is significant that in the immediately lower stratum Tell Judeideh XII objects of late Jemdet Nasr period were found together with imported objects of the time of the I Dynasty in Egypt.[258] The dating of Tigani II and Kum Tepe Ia *c.* 2900–2800 is therefore the earliest possible, according to Mesopotamian and Egyptian chronology. It is further very important that in Palestine and Syria the technique of burnished decoration begins to appear from the early stage of Bronze II in Palestine (after 2800); this continues a similar line of development in Tigani, Kum Tepe and Bos Höyük.[259] So it is extremely likely that Tigani III and Kum Tepe Ib on the one hand, sub-neolithic—E.M. I in Crete on the other, and the so-called 'Danubian level' on the Greek mainland are to be set at the earliest about 2800. So, reckoning 100 years for Kum Tepe Ib, it is assured that the beginning of Troy I cannot fall before 2700. This can be supported also through Alişar and Alaça Höyük, but it would lead us too far to substantiate this here.

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[252] S. Weinberg, *AJA* LI (1947), 178 f.

[253] R. Heidenreich, *op. cit.*

[254] R. I. Braidwood, 'A Synoptic Description of the Village Cultures, Material, Human Origins', *Select Readings of the University of Chicago* II (1945), 30 f.

[255] J. Garstang, *LAAA* XXV (1937), 71 ff.; XXVI (1938), 38 ff.; *AJA* LI (1947), 1 ff.

[256] C. W. McEwan, *AJA* XLI (1937), 8 ff.; Braidwood, *op. cit.*, 16 ff.

[257] K. Bittel, *Arch. Anz.* 1940, 100; *Kleinasiatische Studien* (1942), 152.

There is no need to argue fully that the treasures of Troy II (III according to Schaeffer) are contemporary with the royal graves at Alaça Höyük.[260] Countless objects from these graves show the closest correspondence with the finds from the royal graves of Ur (*c.* 2400–2350) and objects from the palace of Naram-Sin (2301–2246), so that it is likely that Troy II came to an end about 2300. This date can be supported through Samos and Crete, on the basis of the Egyptian chronology. The still unpublished finds of the Heraion of Samos allow the establishment of a clear connection between Crete and Troy II–III, which confirms the dating already reached. So it seems to me that my proposed chronology of the Aegean development is satisfactorily established, so far as possible in this short space. Finally I should like to add some remarks on the 'high chronology' according to which Troy I was founded *c.* 3200.

C. W. Blegen has attempted, most recently in his paper 'New Evidence for dating the Settlements at Troy', to obtain dates for the individual strata at Troy.[261] This dating—in contrast to Dörpfeld, whose dates are approximately reckoned on the ground of general observations on the dimensions of the strata and the course of development[262]—is obviously obtained on the basis of imported Early Helladic sherds. So apparently a very high antiquity for the beginning of the Early Helladic culture is assumed without proofs being produced. Blegen thus reached the unproven conclusion that Troy I is to be set *c.* 3200–2600, Troy II 2600–2300, Troy III–V 2300–1900 and Troy VI 1900–1300. K. Bittel in his latest work sets Troy I *c.* 3200–2600, Troy II 2600–2300, Troy III–V 2300–1900, though he offers evidence only for Troy II,[263] and for the dates of Troy I apparently rests on his article in *AfO* XIII, 299–307. Here he showed that seals of Jemdet Nasr type were found in Troy, and—although the stratification of the seals is uncertain—assumed that Troy I must already have been founded at this time. Finally S. Weinberg undertook to date the Aegean development.[264] He has worked many cross-lines that are by no means secure. Starting from Troy, he used the stratification of E.H. sherds there to determine the age of the Early Helladic culture. Surprisingly, he calls for this purpose at the end of his work on the dates proposed for Troy by Blegen, and from that point determines the age of the Early Helladic culture and the remaining Aegean cultures.[265] Thus he reaches the surprising result that E.H. I began about 3100, E.M. I about 3200. But it is quite obvious that he has lost sight of the fact that Blegen dated the strata at Troy on the basis of relations with the Early Helladic culture, so that he has fallen into a vicious circle. This makes it unnecessary to say anything further about his other dates.

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[258] H. Frankfort, *American Journal of Semitic Languages* LVIII (1941), 355 ff.; H. Kantor, *JNES* I (1942), 201, n. 154.

[259] H. Frankfort, *Studies in Early Pottery* II (1927), 75; Kantor, *op. cit.*, 198.

[260] C. Schaeffer, *Stratigraphie comparée* (1948), 240 ff.

[261] C. W. Blegen, *BSA* XXXVII (1936–7), 9 ff.

Finally we must go into H. Frankfort's dates. In his examination of cylinder seals he came to the conclusion (as did also Bittel) that a seal from Troy is manifestly worked in Jemdet Nasr style. Further he pointed out that a seal of this style was found in the Cyclades with very early Cycladic objects; this moved him to date Troy I and E.C. I about 3000 B.C.[266] There can be no doubt about the Jemdet Nasr characteristics of the seals, but it is another question how long they remained in use and when they were buried. It may thus be pointed out that cylinder seals were used later in Troy II to decorate big storage vessels.[267] So it may be suspected that the seals of Jemdet Nasr type were in use for a very long time. It is surprising also that a whole series of cylinder seals was used for the decoration of big storage vessels at Tiryns, Asine, Zygouries, Corinth, Eutresis and elsewhere.[268] All the cylinder seals here used belong according to Frankfort to the late Jemdet Nasr and the first early dynastic periods (*c.* 3000–2800).[269] From stratigraphical observations it is quite clear that the storage vessels with this decoration are to be placed in E.H. II–III. To place E.H. II–III *c.* 3000–2800 is impossible, for the chronological connections with Egypt tell a completely different story. So we see that old types of cylinder seals, or old specimens, were kept for a very long time in Greece and Troy. This removes any cogent ground for putting the beginning of Troy I as early as 3000 B.C.

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[262] W. Dörpfeld, *Troia und Ilion* (1902).

[263] K. Bittel, *Grundzüge der Vor- und Frühgeschichte Kleinasiens* (1945), 21, fig. 52.

[264] S. Weinberg, *AJA* LI (1947), 165 ff. Note that on p. 178 Weinberg rightly equates E.M. I with the III Dynasty in Egypt (*c.* 2670–2620), but in his table surprisingly sets it between 3200 and 2800, which is obviously quite impossible. This of itself disposes of all Weinberg's other dates.

[265] *Ibid.*, 182.

[266] H. Frankfort, *Cylinder Seals* (1938), 232, 237.

[267] H. Schliemann, *Ilios* (1881), 459, figs. 482–3; H. Schmidt, *Schliemanns Sammlung* (1902), Cat. no. 2552–3.

[268] K. Müller, *Tiryns* IV (1938), pl. 15–19; Frödin and Persson, *Asine* (1938), 232, fig. 168; C. W. Blegen, *Zygouries* (1928), 121, fig. 114; L. Walker-Kosmopulos, *The Prehistoric Inhabitation of Corinth* (1948), 55, fig. 36; etc.

V. M.

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[269] Frankfort, *op. cit.*, 39 ff.

SECOND THOUGHTS ON 'MYCENAEAN' POTTERY IN ITHACA

When I wrote my report on the excavation of Polis,[1] Ithaca, the leader of the expedition had suggested [2] that in Ithaca, Early Bronze Age pottery had persisted till the closing phases of the Late Bronze Age, which meant that Ithaca was a backward little place well away from the broad stream of contemporary culture. I thought it possible that there was another lag after the Late Bronze Age, and I called certain vases 'Mycenaean,' taking fabric to be the determining factor. My paper was written in 1932, but not published till 1942, and long before then I was sure that we were both wrong. Mr. Heurtley wished to account for the presence of fifty Mycenaean sherds in an Early Bronze Age Settlement at Pilikata. It is true that no Middle Bronze Age settlement has yet been found in Ithaca. That may be our bad fortune, or the island may have been uninhabited in the centuries before 1500 B.C., as it was in the sixteenth century A.D. It seems simpler to admit disturbance by any later diggers of foundations or seekers of wells, than to postulate an iron curtain between Ithaca and both its nearest neighbours, Kephallenia and Leukas, in the Middle Bronze Age. After all, Early, Middle, and Late Bronze Age sherds were found together in Area VI at Pilikata, and no house plans have resulted; [3] some disturbance seems inevitable.

Another possible disturber of this deposit has generally been diagnosed by visiting scholars as a sherd from an East Greek Subgeometric plate of about 700 B.C. at the earliest (Fig. 1. 4). The excavator claims it as 'Early Helladic patterned ware.' [4]

In Tris Langadas [5] we came on an irregular line of humus about eight inches broad coming down from the surface through the chalky deposit. In England it would have been a rabbit hole: at Tris Langadas in Ithaca probably a marten made it.[6] At the foot of the humus we found the one Geometric sherd in an otherwise pure Mycenaean deposit. The hole was easily detected at Tris Langadas because there had been little disturbance of the site after the initial catastrophe; there are now no martens at Pilikata, but there may have been a rat, and the deposit at Pilikata was too confused to allow of the detection of rat-holes.

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[1] *BSA* XXXIX, 1 ff. (referred to as *Polis*).

[2] *BSA* XXXV, 43.

[3] *BSA* XXXV, 14 and fig. 11.

[4] *BSA* XXXV, 22, 23; fig. 18, no. 68. Shape as Eilmann, *AM* 1933, 111, Abb. 54. A similar pattern is found on plates at Samos (*ib.*, Beil. 34) and is popular on skyphoi (p. 68).

[5] To be published.

[6] The site is on the edge of wild country just above Polis Bay.

If the theory of an Early Bronze Age lag [7] was ever possible, it was disproved by my discovery of a Mycenaean building of the thirteenth century B.C. at Tris Langadas, where the only possible legacy from the Early Bronze Age was some rough cooking pots.

To come to Polis and my palinode, if fabric alone could be taken as the criterion of Mycenaean pottery, its most noticeable characteristic at Mycenae and Athens, and even at Astakos, is a fine bright glaze, and all the 'Mycenaean' at Aetos, and the greater part at Polis, would fail in this test. Pottery from Corinth kept its surface at Polis (see *BSA* XXXIX, pls. 11, 12), and so did some 'Mycenaean' (see *ib.*, pl. 5. 24*a*); Protocorinthian could look bright at Aetos. The 'Mycenaean' pottery which was generally dingy at Polis, and always drab at Aetos, was, I suspect, a dim fabric from the first. But fabric is not the only test, and in judging the date of other factors the chronological limits of pottery found at Mycenae [8] should in my view be the criterion of 'Mycenaean' pottery.[9] Pottery found elsewhere with definitely later characteristics to be dated after the fall of Mycenae should be called not 'Mycenaean' but something else. The Germans in the Kerameikos call some of it 'sub-Mycenaean' [10] to emphasise the Mycenaean nature of the fabric, but the line between it and Protogeometric is a difficult one to draw.[11] Away from Athens the issue is confused by a new crop of irregular minutiae, and sharp distinctions become still harder to make.

It is now agreed that Geometric and Protogeometric pottery evolved at Athens. The salient changes from Mycenaean style are: (1) Shapes. These are elongated and contours are more clearly defined.[12] (2) Patterns. Geometric motives had long been used as subsidiary elements of decoration; after the fall of Mycenae they become the principal, and often the only motives; early in the Protogeometric style the use of rulers and compasses was introduced.

Post-Mycenaean characteristics at Polis are:

(1) Conical feet.

(2) Hatched and cross-hatched triangles and diamonds, concentric loops etc., used as the main pattern.

(3) Ringed kylix stems.

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[7] There was an undoubted persistence of Protogeometric patterns in Ithaca, in the eighth century, but the sherding potters of Aetos were never a satisfactory explanation of this phenomenon. Heurtley, *BSA* XXXIII, 65.

[8] There are of course many local styles of 'Mycenaean'; Wace and Blegen, *Klio*, 1939, 131 ff.

[9] I stress this point. P. Demargne in his stimulating book, *La Crète dédalique*, first equates sub-Mycenaean and Protogeometric (with which I sympathise) and then throws in 'Granary Class at Mycenae' apparently as another synonym. This is too much (pp. 96, 97).

[10] Furumark (*The Mycenaean Pottery*, p. 8) calls it 'Myc C: 2.'

[11] Even in Athens there is the incongruity of a similar but typologically later vase appearing in an earlier category, *e.g.*, *Kerameikos*, I, pl. 13, inv. 505 and inv. 526. 505 is called sub-Mycenaean, but it has a lower centre of gravity than 526 called Protogeometric; I note, too, with approval that in *Kerameikos*, IV, grave 112, *Kerameikos*, I (sub-Mycenaean) = grave 21 (Protogeometric). Graves 84 and 92 (pl. 13) including inv. 505 might well go with it.

[12] See *Kerameikos*, I, 195 ff.

(1) *Conical feet.* These do not occur at all at Mycenae (various other high bases do occur). They do not occur at Athens until the Protogeometric style is established,[13] and they continue into the Geometric period. They are also typical of the Protogeometric period at Knossos.[14] The Polis feet are

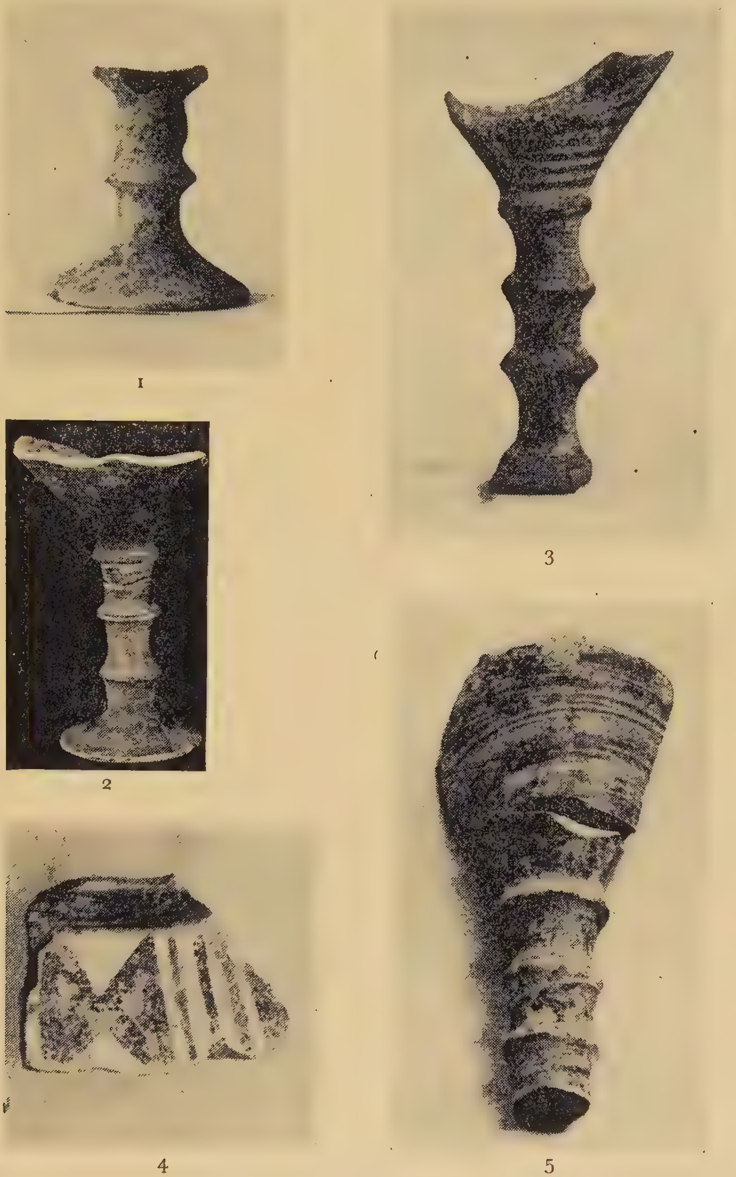

Fig. 1.—East Greek Sherd from Ithaca, and Ringed Kylix-stems.

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[13] Contrast *Kerameikos*, I, pl. 67, with pl. 23.

[14] *BSA* XXIX, pl. VI.

more conical than any of the Kerameikos sub-Mycenaean high feet (for grave 112 see n. 11). Vases with conical feet at Polis[15] should be classed as Protogeometric. So should the many conical feet found in and near the so-called ' cairns ' of Aetos.[16] The shape of an Aetos bowl[17] with a conical foot is narrower[18] and later than the Polis kantharoi.

(2) ' *Later*,' i.e. *post-Mycenaean*, *patterns*, after the fall of Mycenae. Elements of these are liable to occur in many styles, but they are not found as the main decoration in the Granary class at Mycenae. They do occur sparingly in sub-Mycenaean[19] and commonly on Protogeometric[20] pottery at Athens and in Crete. *Polis* No. 26, already claimed as Protogeometric because of its conical foot, has also got cross-hatched triangles. It is no good pointing to the triangles on ' close style '[21] Mycenaean vases. The Polis triangles are different. It is a new style.

The style of these Polis triangles is not so unlike that of the Late Protogeometric patterns in *Kerameikos*, I, pl. 47. Some patterns at Polis are more like the Early Protogeometric patterns *ib.*, pl. 62.

Again all these ' later ' patterns occur in the Aetos deposit, and, moreover, they are found in company with compass- and ruler-drawn patterns and others which probably belong to the end of the Protogeometric[22] period. Probably the vases with ' later ' patterns as defined above should be considered Protogeometric at Polis, that is to say, 32–4, 37–9, and many unrecorded sherds.

(3) *Ringed kylikes*. (*Polis*, pl. 8, p. 13). Note the sharp angle of their three rings (pl. 8): they are intentionally and efficiently made; they are not just vague bulges where the hand of the potter shook. These sharp profiles accord better with the clear definition of the new style than with slow, indefinite Mycenaean curves. They all have triangular bodies and small bases. Furumark[23] said that a ringed kylix occurring at Asine may be LH III C 2. I have no doubt that ringed kylikes at Polis are later, *i.e.*, Protogeometric:[24] viz., *Polis*, nos. 62–7, another, not illustrated (monochrome), and a good many pieces. One decorated ringed kylix (*loc. cit.*,

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[15] *BSA* XXXIX, pl. 6, nos. 25, 26; p. 11, nos. 25–31, and many other ' high feet.'

[16] *BSA* XXXIII, 44, fig. 17; see below. There is evidence that the ' cairns ' may be collapsed houses.

[17] *Ib.*, fig. 10. Common in Early Protogeometric, see *Kerameikos*, I, pl. 63. Both patterns and shape are further advanced than *Kerameikos*, I, pl. 23.

[18] The reconstructions on pp. 41 and 42 (Aetos) are made on insufficient evidence and are probably too broad.

[19] Sub-Mycenaean: *Kerameikos*, I, pl. 27.

[20] Protogeometric: *Ib.*, pl. 47; *BSA* XXIX, pl. VI, 13; E. Hall, *Vrokastro*, pl. XXVII, 2, found with a Protogeometric oinochoe.

[21] *E.g.*, *BSA* XXV, pl. VII.

[22] Some of these come very close to the patterns at Athens. Cf. *BSA* XXXIII, pl. 3 with *Kerameikos*, I, pl. 51.

[23] Furumark, *The Mycenaean Pottery*, No. 276, fig. 17, p. 63.

[24] My footnote, *Polis*, p. 13, n. 6, says that cups in Cyprus (the majority of which have conical feet) look Protogeometric, as indeed they do. Mr. Daniels dated his material too high, and the reference supports my present position, though Mr. Daniels' ringed kylix *AJA* XLI, pl. IV. 54 is rounder and therefore typologically earlier than the Polis kylikes.

pl. 9*a*) has Protogeometric patterns drawn with a ruler in an elaborate late style.[25] My 'Transitional class' is of course Protogeometric. I add a photograph of an unpublished ringed stem from Polis (Fig. 1. 3), of another, said to be from Polis (Fig. 1. 5), and of a third at Olympia[26] (Fig. 1. 2), because they are all so alike, same brown paint, same neat shape; no. 3 has rather Geometric-looking, narrow, reserved lines. Lastly I add another paler, with two rings, in Syracuse Museum (Fig. 1. 1). Ringed stems occur at Aetos. In my view, the style of the pottery of the 'cairns' deposit is overwhelmingly Protogeometric, moreover, most of it is late Protogeometric. Very few sherds could possibly have come from Mycenae, and I have not yet seen a single sherd there that must have come from Mycenae, or that must be contemporary with the 'Granary class.'

The triangular kylikes 59 and 60 (*Polis*, pl. 8) are certainly near Protogeometric times, especially 60 with its swollen stem, but they may be sub-Mycenaean.

My Protogeometric class at Polis will now include 'Mycenaean' nos. 25–34, 37–9, 62–8 as well as 'Transitional' and 'Protogeometric.'[27] Peculiarities at Polis which may be local and are not dateable elsewhere must at present remain doubtful; this refers to kantharoi[28] on ring feet and to many of the hydriai[29] or jugs with cut-away necks, and the stirrup vase 69. There is, however, still a considerable residuum of undoubted Mycenaean pottery from Polis: pl. 4. 23; pl. 5. 24*a*, 39*a*, 54; pl. 6. 53, 24, 20; pl. 7. 40–43, 57; pl. 8. 55. Add many unfigured sherds and nos. 16, 17, 56.

The sherd *Polis*, no. 35, pl. 7 (a frieze of wheels) is probably Geometric. No. 52, pl. 6, may also be Geometric, at any rate post-Mycenaean.

Comparison with Early Geometric amphorae from the *Kerameikos*[30] suggests that the three-handled jar *Polis*, pl. 4. 13 is in shape, decoration, and fabric near the beginning of Early Geometric. It has a light ground, and it has lowered its centre of gravity, contrast the jug below: its three reserved lines are close together below the handles, it has an incipient panel between the handles, and a reserved line on the neck.

Considering the extraordinary forms and decorations of Ithacan pottery, it seems rash to attempt to date the amorphous scraps from Pilikata[31] at all closely. Mr. Heurtley's neat drawings flatter them; it is impossible to photograph them—no surface, and only blurred edges. Their fabric and shapes seem Mycenaean, but as archaeological evidence for the site of the Palace of Odysseus they fail to carry conviction.

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[25] Cf. the decoration of inv. 2013, *Kerameikos*, IV, pl. 8, grave 40.

[26] The example quoted by Mr. Heurtley from Olympia (*BSA* XXXIII, 63, n. 14) has small rings and is, I think, a Minyan stem. Furtwängler seems to have thought so too (*Olympia*, IV, 199, no. 1285).

[27] As the pattern on *Polis*, pl. 9*e* is invisible I give a description. A central ornament like that on *f* next door, between dicing. The St. Andrew's cross is, however, black between reserved lines. Cf. *Kerameikos*, I, pl. 49, foot.

[28] With one handle they may be Granary class, but they may also be later; *Polis*, 46–51*a*, p. 13, pl. 6.

[29] The vase 5 on *Polis*, pl. 4 is of good fabric, but the stripe is unusually wide. Mr. Dunbabin quotes a vase in Corinth Museum; see also Stubbings, *BSA* XLII, pl. 9, and *Kerameikos*, I, pl. 20, 439.

[30] *Kerameikos*, I, pl. 73.

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[31] *BSA* XXXV, 32–3.

HELIKON IN HISTORY: A STUDY IN GREEK MOUNTAIN TOPOGRAPHY[1]

(PLATE 42)

1. SOME CONSIDERATIONS ON MOUNTAIN TOPOGRAPHY IN GENERAL, AND THEIR EFFECTS IN GREEK HISTORY

People who walk in mountains grow accustomed to finding their movements facilitated from time to time by what the mountaineering books call ‘ corridors ’ or ‘ high-level routes,’ in places where one might have expected nothing but large stones. There is a famous one from Zermatt to Arolla. There is a little one between Stye Head and Sca Fell, running from Skew Ghyll to the Ling Mell col above Hollow Stones. There is another—improved but not created by man—along the north face of Pillar Mountain. Of the same nature, and equally unexpected at first, are the ‘ rakes ’ and ledges which sometimes run right across a rock face, and assist, as one might say, the tactics of the mountaineer, just as the major high-level routes assist him in his strategy. They may even assist the faint-hearted to get off a face altogether. Or, of course, such a ledge may be upside down, and then it is not so good.

With a little thought and a little geology, one presently realises that these places are not merely the work of Oreads or Titans in a mood of caprice. Since most mountains are composed of stratified rocks (although sometimes the strata are standing up on end), one realises that their surface is bound to be marked by whole systems and series of grooves, big and little; and these will naturally sometimes assist one's movements, *if one is concerned to go ‘ with the grain,’* so to speak, along the lines of cleavage, which usually means along the long axis of a mountain mass—instead of being anxious only, as people usually are, to *cross* the mountains by the shortest route from side to side.

High-level routes differ from ordinary valleys in not being water-worn; or rather, water and ice are more likely to have gouged them out on the downhill side, spoiling rather than improving the going; but nevertheless most major valleys—the valleys of *rivers*, other than mountain torrents—follow similar lines of weakness, and therefore run mostly ‘ along the grain,’ so to say, of the mountain systems which they drain. The Arachthos and the Acheloos, with its tributary the Megdovas, are examples in Greece; or, to come nearer Helikon, our ultimate goal, the valley of the Boeotian Kephisos is, of course, a typical ‘ corridor,’ running parallel to the submerged corridor of the Euboean channel (just not blocked at Chalkis) and not quite parallel to that of the Corinthian Gulf, just not open at the Isthmus.

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[1] This paper was read to the Classical Association at Oxford on 12 Feb. 1948.

As regards these elementary facts of Greek geography, since there is no need μακρηγορεῖν ἐν εἰδόσι, τοσαῦτα μὲν εἰρήσθω. But there are two other facts, or classes of facts, of the same order which are at least not so generally appreciated, and to which, therefore, I propose to draw attention.

The first of these is the comparative ease of movement through all that tangled mountain ‘ Epeiros ’ of north-western Greece, so long as you are concerned to move along the axis of the main ranges. Most of the great barriers are obstacles only to crossing from side to side. To one moving SSE. or NNW., on the other hand, there is sufficient choice of routes to have enabled Pyrrhos, marching from Epeiros on Aetolia and Demetrios Poliorketes, marching from Aetolia on Epeiros, to miss each other altogether (Plutarch, *Pyrrhos*, 7), so that both armies reached their goals unopposed. These routes were well-known and frequented in ancient times; the Ambrakia–Dodona–Valona route, by which the Corinthian reinforcements for Epidamnos went πεζῇ ἐς Ἀπολλωνίαν in 434 (Thuc. I. 26. 2) no less than the eastern (upper Haliakmon ?) route by which Alexander moved when he marched from near Ochrida to Boeotia in thirteen days. Between these two must not be forgotten the route from the Viniani gap, which was the Aetolians’ back door to Thessaly on more than one occasion.

The latest example of swift movement of an army down the west coast of Greece is that of the Hitler Bodyguard in 1941, who, after reaching Thessaly by way of the Haliakmon-to-Kalabaka saddle, switched across to the west side by the new Metsovo road, dashed down to the Corinthian Gulf, and crossed (like the Dorians according to tradition) to continue their drive down to Kalamata through the western Peloponnese.

That is Point 1, and if no new discovery, it is still a point that deserves and perhaps requires emphasis for the better understanding of the history of Greece and her invaders.

Point 2 brings us back to my opening remarks. Where one finds large and conspicuous systems of parallel valleys, visible on any map, there one is likely to find also, in places, corridors and high-level routes which may be barely distinguishable even on the best contoured maps (of which the Greek Staff Map is not one). The existence of these natural routes along, over, and through the mountains is often of tactical importance. They help to explain, for instance, how guerilla bands with local guides can so constantly evade pursuit, not only disappearing into the forests but getting away with considerable speed out of a dangerous area.

One of the very best high-level routes known to me anywhere, by the way, is that which runs along the top of the mountain (κατὰ ῥάχιν τοῦ ὄρεος, Hdt. VII. 216) behind Thermopylae, and, I imagine, gained for it its name of Kallidromos. The καλὸς δρόμος is, in my opinion, the upper valley of that branch of the Asopos which comes down from the east. (A slightly larger branch, it will be remembered, comes down out of Oita.) It has never, so far as I know, been emphasised in any book what an extraordinary place that upper valley is; though there is a good map of Kallidromos (much clearer than the Staff Map) in the *Cambridge Ancient History*. It is a pity Herodotos lacked the time or the inclination to visit it; but Herodotos, like most people, presumably was only at Thermopylae in the middle of the day, *en route* for somewhere else. If he had been there at sunrise or sunset he would hardly have got his points of the compass so completely wrong.

The upper Asopos valley runs *along the top* of the Anopaia or Kallidromos mountain, with the ridge of Liathitsa rising in gentle, grassy slopes on its north or right bank, and a lower parallel ridge, rising only just enough to make the place a valley at all, on the south. Between the two runs the valley, a furlong wide, flat-bottomed, full of silt, a couple of miles long (with a kink half-way, where you walk round the corner of the steep rocks of Liathitsa summit); so nearly level from end to end that the stream has cut itself deep meanders as though in an English meadow; and in April, when the snow is just melting, so full of white and purple crocuses that it is impossible to walk otherwise than on them.

To Hydarnes its interest must have been in the fact that it gave the opportunity of moving a large body of troops, at a reasonable speed and without getting strung out at obstacles, in the dark. It was to show them this that the Persians needed a local guide—not to show them the way up the Damasta spur, much less the lower Asopos ravine, which is the first detail you notice from beyond Lamia, ten miles away.[2]

(I was assured at Eleutherokhori, by the way, that in 1941 the British Imperial Forces drove their lorries over the mountain to escape strafing on the road, blowing up the engineered path from Eleutherokhori behind them. They certainly blew up the path.)

At the eastern end of this paradisal valley, you have the main summit of Kallidromos on your right. You rise slightly to a col, among outcrops of rock, where you would need a local guide in the dark; and then the groove along the top of the mountain reappears in the form of another and longer valley descending due eastwards through a region called Elaphovouni—Hart Fell.

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[2] Herodotos' earlier mention of the ravine (διάσφαξ, VII. 199), compared with his account of the path (VII. 216), surely makes it perfectly clear that the path did not go up the ravine. The Germans in 1941 attacked up the spur.

I will not stop to discuss where the Persians came down. The Κερκώπων ἕδραι should be the rocks near the end of the Dhrakospilia path; but anyhow east of the narrows of Thermopylae the cliffs open out, and there are several possible ways. There would not be a hope, once the enemy were up, of stopping them getting down. All that Leonidas (whom the grim Persian frontal attacks had successfully misled into keeping his main force on the coast road) could now do was to sacrifice himself with a strong enough rearguard to let his main body get a good start.

'History repeats itself' as journalists say—meaning that the facts both of geography and of human nature have a certain permanence. Only two years ago I stood on the hill above Levadhia on a clear day, while an ex-ELAS andartis pointed out to me the gully above Dhavlia, giving an easy route through the crags of the great gable-end of Parnassos, up which, in 1943, German mountain troops guided by some modern Ephialtes scrambled by night, to surprise an ELAS battalion bivouacked in the high woods.

2. The Topography of Helikon

A particularly good example of all that I have been saying is given by the topography of Helikon.

As you go north-west through Boeotia by the Thebes–Levadhia road (*très abîmée*, *à peine carrossable*, and generally excruciating, but inevitable)—Helikon rises on your left in steep and uncompromising slopes surmounted by a certain amount of crag. If you were to scale those slopes (behind Haliartos, for instance) all you would see on crossing the summit rocks at about 3000 feet is a glen at a fairly high level, and beyond it the still more uncompromising slopes of Dhiakopi, rising to about 5000, with cliffs—the Helikon of Hesiod. It is the same story if one goes up the more rounded slopes of the hill behind Levadhia: one faces merely a slight drop, and a higher range behind. It is only at Koroneia that the mountain wall is broken, and there, as you look up the fine θέατρον of the Koroneia or Phalaros valley, the view is bounded by the noble pyramid and bald head of the Palaiovoúna, 5700 feet, the 'Old Man' of Helikon himself.

Viewed from the sea side, as many will remember, the angle is even steeper: 'Where Helicon breaks down in cliffs to the sea'. (Matthew Arnold's geography is more literal than Shelley's is in some passages.) Here, then, one might imagine, is Boeotia's west wall, her mountain bulwark against any invader at least from that direction.

In practice, Helikon did not function at all like that. In fact, from the time of Epameinondas and his predecessors to this day, it has always been not a comfort but a headache to any persons in charge of the defence of that part of Boeotia.

To see why, let us look at the topography in a little more detail.

Helikon, in the widest sense, including all this region, is not a monolithic mountain mass, but a system of three (or at one end four) parallel ridges. All except the culminating one (that nearest the coast) are cut through by the Phalaros valley and by that curious 'upper landing,' above its head waters, at Koúkoura. It is a very curious place, this Koúkoura basin. It does not look like a glacier-scoop, and must once have been drained by the visible, as now by the underground, head-waters of the Phalaros. From it, east, south-east, west and north-west, radiate valleys which may once have held streams, but are now dry except immediately after rain, and all the better going on that account.

To the plain of Boeotia, as we have seen, Helikon drops steeply; even the gully that descends at Thisbe, which in fact is the end of an important route, is so repellent in its lower reaches that the path which emerges by it soon leaves it and takes to the spur on the right bank; and the Boiotoi of the Early Iron Age, who were essentially plain-dwellers, seem to have taken little interest in their mountain. (Perhaps this is why a stranger like Hesiod's father was able to take land there.) The result was that the westward slopes of Helikon remained in other hands—those of the Phokians; and it so happens, moreover, that on that side the mountain drops more gently and gradually to an intermontane plain which is itself at a relatively high level—about 1000 feet—the plain of Stiris, now famous for the monastery of Holy Luke; in ancient times held by the small but old Phokian city of Stiris with, at least in the fourth century, very adequate walls. From Stiris paths radiate in all directions: west into Phokis, to Medeon and Antikyra on the Gulf, and to Ambrosos—modern Dhistomon, πολυδάκρυν[3]—while eastward, two excellent routes penetrate into the heart of Helikon, by way of the modern villages of Kyriáki or of Ziríkia via the valley-head called Orokhós (a non-Greek name and therefore banned from the Greek Staff Map); not to mention the south-coast route by the ancient forts of Boulis and Korsiai (modern Zálitsa and Khóstia) which is not only farther, but involves (it may be surprising to find) more ascent and descent. The south-coast route measures some 34 kilometres from Stiris or Medeon to Thisbe, twice touching 800 metres (2600 feet) and dropping to sea-level between; while via Kyriáki, it is barely 29 kilometres from Stiris to Thisbe, with maximum height about 1000 metres (3250 feet, or 2250 feet above the plain of Stiris) at the col and crossroads of Kiápha

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[3] German troops, in 1944, provoked by the massacre of a small isolated group, carried out here one of their most revolting massacres.

Vári east of Kyriáki. The route is practicable for horses (as a Spartan army once proved), though there is some rough going on the way down; there is only the gentlest of uphill going east of Koúkoura; and the whole route of some 18 miles with under 2500 feet of climbing can easily be done by considerable bodies of men in a day, or the best part of it (there's the rub) in a night.

These main routes which I have mentioned are by no means the only ones; and they themselves communicate and run into each other by numerous variations. From Kiápha Vári for instance, by way of an easy route in a dry valley, one may reach in an hour the col of Bab-Louk (Bab-el-Luk?)—yet another non-Greek local name, barred from the Staff Map—at about 4000 feet, overlooking the sea. Thence a path follows a natural ‘ high-level route ’—a shelf, high up on the south face of the Palaiovoúna—before descending upon Khóstia; or one can drop down, very steeply, to join the Boulis route near the Monastery of St. Seraphim. Again on the other side of the mountain, the ‘ cross-roads ’ and spring at Orokhós can also be reached from the Parnassos direction by a genuine ridge-track, via the long spur which the Helikon group throws out in this direction.

The ease of these north–west to south–east communications contrasts with the relative difficulty of communication ‘ across the grain ’ from central Boeotia to the sea. From the main road at Koroneia to the sea at Boulis is only about twelve miles as the crow flies, but more like twenty as the path winds, and one must either cross the high col of Bablouk (1100 metres higher than the road at Koroneia, whereas Kiápha Vári is less than 700 m. above Stiris) or else go much farther round.

Circumstances thus conspire to make the south coast of Boeotia the isolated place that it is—even the part of it that can be reached by the valley from Thespiai.[4] In the Midde Ages the seaward slopes of Helikon were found suitable by hermits in search of peace and quiet—by Holy Seraphim at the place that bears his name, as by Holy Luke farther west, before he migrated inland to Stiris. Today, the mountain villagers of Steveníko, Ziríkia, and other places have traditional rights to winter pastures down by the sea, and cross the watershed to get to them; but from the few lonely farms that are occupied all the year round, they seem to do most of their shopping, not twelve miles away as the crow flies, in Levadhia, but thirty miles away across the water in Xylókastro. One or two Mycenaean sherds which I picked up at Khóstia had presumably got there by the same route.[5]

So isolated is this coast that in 1947, as was reported in the Press, Greek commando troops were landed from the sea to chase the guerilla bands on Helikon who had just abducted a Greek M.P. They were following the same method as the Germans early in 1944, who used this method of attacking andartes, with their British liaison officers, hiding in the fir-forests. 'Germans landing from the sea to attack Greeks and British, on the coast of the continent of Europe under German occupation.' How Thucydides would have enjoyed the περιπέτεια!

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[4] On the general matter of routes in Boeotia, see Gomme's well-known article in *BSA* XVIII (reprinted in his *Studies in Greek History and Literature*, 1937).

[5] Cf. W. A. Heurtley, ‘Notes on the Harbours of S. Boeotia, and Sea-Trade between Boeotia and Corinth in Prehistoric Times’, in *BSA* XXVI, for other Mycenaean finds here and at Kreusis (Livadostro) and at Thisbe and Haliké.

How nervous the fourth-century Boeotian governments were about all this coast during the war with Sparta and Sparta's naval allies is shown by the care they took to fortify it with the fine stone walls still visible at Kreusis, Siphai, Khóstia (I cannot improve on Frazer's identification of this as Korsiai), and even at Thisbe, a little inland. Boulis, on the other hand, farther west, concerning whose allegiance to Boeotia or Phokis Pausanias hesitates, was not, I imagine, in Boeotian hands at this time. Its walls are not in the same fine ashlar masonry, but rougher, in smaller stones, and not straight but curving with the slope of the hill.

Lengthwise through Helikon, on the other hand, all manner of people pass easily; especially any people who might be stopped if they tried to go by the road; guerilleroes infiltrating from the high Pindos down into Attica, in 1948 as in 1943–4, for example, as well as peaceable shepherds moving between summer and winter pastures in the same two areas. People whose errand is a warlike one bide their time on the edge of the fir-forest and slip across the Vale of Thespiai by night from Helikon to Kithairon. (In 1943, a Greek told me, the Germans tried to block the Kithairon passes with wire and a line of posts, but were baffled, largely—like the Greeks before Plataia!—by the difficulties of water-supply.) This way, too, went people escaping from German-occupied Athens to join the andartes in the mountains; this way, in the War of Independence, Karaiskakis moved between Attica and western Roumeli, no matter how many Turks there might be in Livadhia; and this way no doubt came the Slavs in the Dark Ages who brought such foreign place names as Zagará to villages in Helikon.

Even marauding beasts, one may add, sometimes come down through Helikon. In 1946 a shop-front in the ruins of Domvraina was decorated with the head and hide of an enormous and (by its teeth) very old wolf, which had made havoc of the local sheep until someone succeeded in trapping it. It had appeared suddenly; not, therefore, probably a local denizen, but an old beast from up-country which, finding life too strenuous in its old age, had taken to easier but perilous ways of life, after the manner of the man-eating tiger.

And in classical times, this way also came Phokians in the mid-fourth century, to baffle Thebes, however invincible Theban infantry might be on the plains; and by the same paths, twenty years earlier, they guided a Spartan king on a great flank march, to win the campaign and then lose the decisive battle on the field of Leuktra.

3. Helikon in Ancient Greek Military History

Thus round Helikon, as in many other places, a study of topography renders intelligible, or at least more vividly intelligible, the history, especially the military history, of a region. One sees why Tolmides the Athenian was ambushed near Koroneia and not at any other point between the hills and the lake. The insurgents got ahead of him unseen, moving by the forest paths up in the mountain, and came down by the Phalaros valley to attack his marching columns. One sees why Lysander fell at Haliartos, or rather why he was able to get so far into Boeotia without meeting opposition. With his army of highlanders (Xen. *Hell.* III. v. 6, 17–21) having a rendezvous to keep with the main army from Sparta, he had simply come in over the mountain in what for the mountain peoples had already for ages been *the usual way*. That action also gives a vivid picture of highlander *versus* lowlander in Greece —each superior on his own ground—in the way in which Lysander's irregulars turned at bay, rolling down boulders, and sent the pursuit back with a bloody nose, when the Boeotian hoplites tried to follow them up that hill.

Even the dreary annals of the fourth-century Sacred War—Ephoros served up scrambled *à la sicilienne*—take on a certain coherence when studied with a map, however much the good Diodoros may have duplicated or *verschoben* some of his battles. At first sight it all looks like sheer nonsense. The Boeotians can march up the Kephisos and ' ravage the land ' in Phokis in the familiar Greek manner—three times in 352 according to Diodoros (XV. 37. 6, 38. 4, 39. 8, 56. 1, 2) and then not again till 347, when they did it twice; but one knows what *that* means. But what does it mean when the Boeotians at one time win a victory and at another suffer a heavy defeat *before Koroneia*, right back in Boeotia, in between these triumphal excursions? And how do the Phokians go on holding Koroneia all this time, after its first capture by Onomarchos about 353 (35. 3)? No doubt the answer is now clear. The Phokians captured and held Koroneia and Korsiai (58. 1) as part of a complete mastery of the Helikon region; they and their mercenaries —Greek mercenaries were usually highlanders—were superior to the Boeotians in mountain warfare, even when on the plains the superiority was the other way. Orchomenos fell to the Phokians early in the war (353 (?); 33. 4), no doubt with the help of disaffection within, and if they could only have captured the frontier town of Chaironeia on the other side of the river, they might perhaps even have been able to secure the Kephisos valley from devastation; but this they never succeeded in doing, though Phalaikos once briefly entered it (33. 4, 39. 8). Probably it held a garrison of Thebans. Thus the Boeotians could still march up the Kephisos, though not without offering battle before Koroneia en route. The war dragged on into a perfect stalemate—or rather, perhaps, ‘ draw by perpetual check ’; a result decisive in Greek history by its very indecisiveness—for it was to break that deadlock that Philip of Macedon was invited into Greece.

The most famous of all Helikon campaigns is, of course, the prelude to the battle of Leuktra. Here again we find Koroneia in the centre of the picture. Epameinondas takes up his position there, in his effort to block the advance of superior Spartan and allied forces (11,000 to his 6000; D.S. XV. 52. 3, Plut. *Pelop.* 20) from Phokis, presumably because the Phalaros valley gave him the best lateral communication with the force under Chaireas, which was guarding the routes over Helikon. The existence of this detachment, which is mentioned by Pausanias (IX. 13. 3), shows that Epameinondas did not simply ignore the mountain routes, as one might suppose from the sketchy narrative of Xenophon (*Hell.* VI. 4. 3).

The Spartan king Kleombrotos, however, showed considerable skill in this, his last campaign. He demonstrated first before Koroneia, or so Diodoros says (XV. 52. 1), εἴ τῳ ἱκανὸς πιστεύειν. He then switched south from the Delphi–Levadhia road to Ambrosos (Dhistomo); next, no doubt screening his movement behind a sufficient screen of light troops, and taking suitable measures to deceive the enemy by calculated ‘ careless talk,’ etc., like Agêsilaos before him (Xen. *Hell.* V. 4. 47–9), he took to the hills with his whole force, including cavalry, ‘ by a mountainous and unexpected route through Thisbe,’ says Xenophon, and defeated and killed Chaireas before Epameinondas could move to support him. The wary Epameinondas had evidently been left completely in the dark; and the merit of the Spartan performance was not in the drawing of arrows on a map, but in the way the movement was carried out.

Which way did Kleombrotos go?

Over the mountain, I think, by the plain of Koúkoura. Diodoros (XV. 53. 1) certainly takes him between the mountain and the sea; but that way is much longer and also, as I have emphasised, involves more rise and fall. Pausanias, who after all was a topographer, says ὑπερέβη (IX. 13. 3); and at Thisbe, as Xenophon says, is just where he would come out. Frazer it is true agrees with Diodoros, on the ground that he must have clashed with Epameinondas at Koroneia; but I am not convinced of that. Once the

Spartans had surprised and overwhelmed Chaireas, perhaps somewhere near Kyriáki, they could get to Koúkoura more quickly than the Boeotians could; it would have been suicide for Epameinondas to attack up the mountain against superior numbers of Spartans and highlanders; and on the other hand there was no point for Kleombrotos in attacking the enemy at Koroneia—this would simply have brought him down into the narrows again, with the enemy still between him and the open spaces.

So the Spartan army moved on down the mountain upon Thisbe, and Epameinondas hurried back by the main road to put himself between them and Thebes. In this he succeeded, largely because Kleombrotos, however daring his flank march, was at bottom, like most Spartan kings most of the time, playing for safety. Before moving upon Thebes, he fell upon and captured the strong fort at Kreusis with the dozen Boeotian triremes that lay there, thereby unblocking his communications with the Peloponnese either by sea or by the track—bad, but the only one—over the western spurs of Kithairon to Aigosthena. At last, he was on the plain of Boeotia with the good old Isthmus route clear behind him; but meanwhile Epameinondas had occupied the gap between the sharp bend of the Permessos—the ‘ Askra brook ’—and the head waters of the Asopos. Kleombrotos’ chances, however—given his superiority in numbers—looked so good that he simply could not, in the face of his own troops, avoid the pitched battle that he had always avoided hitherto; and so there, in that undulating, open cornland, Epameinondas’ ‘ oblique approach ’ (there was much more to it, as Plutarch shows, than merely massing his best troops on the left) and the quality of his Theban infantry made good all that had been strategically lost in the manoeuvres over Helikon.

I would like to say something about another Helikon battlefield: about the Boeotians’ earliest great ‘ deliverance of Greece,’ as Plutarch calls it, by the long siege and decisive battle of Kerêssos (Paus. IX. 14. 2, Plut. *Camillus*, 19) against the Thessalians, before 570 B.C. But we simply have no more information about it. All we can say is that round this Helikonian stronghold, near Thespiai and perhaps still closer to Askra, the cavalry of Thessaly were caught off their proper ground. To that extent at least, the personality of Helikon asserted itself then too.

We have come almost to the end—that is, to the beginning—of recorded history. But are we to end a talk on Helikon—since I fear I did not begin by invoking them—without a mention of the Muses? Μὴ γένοιτο.

I have shown, I hope, how the chief significance of Helikon in history is as a *route*: a route for mountain men, and a place with a stormy history largely because it is just here that the mountain ranges, continuous from here to Albania, run out into what by Greek standards one may call the Lowlands.

Does this shed some light on the reason why Helikon was the home of the Muses?

I think it does. The Muses were northern goddesses: Pierides. They had come down therefore, by the Early Iron Age when Hesiod knew them, from the same direction as the various backwoodsmen who were barbarising the old Bronze Age civilisation of Boeotia—' Thracians,' in some stories, including that of the Nightingale and the Swallow (Thuc. II. 29), which as Thucydides tells us ' many poets ' had handled. There are plenty of other legends of ' Thracians ' in Boeotia in the Early Iron Age, and there is little reason to doubt that there is something in them. But since the easiest way for such ' backwoodsmen ' to come down was by the hills, avoiding the plains and their strongholds, northern folk were almost synonymous with ' mountain ' folk, and the northern goddesses with mountain goddesses. People from the lowlands went back to worship them in the Vale of the Muses, at the very tip of the continuous hill-country. But if you were very keen, you went not only *to* the mountain to worship, but up it, up over 4000 feet, to drink of Hippokrene. Now Hippokrene, as everyone knows, is still there, though you need a long string to your water-bottle nowadays; and even above it, on the ridge of Dhiakopí, just above the spring, is a ruined chapel. And this mountain chapel among the fir-trees, like those down in the Valley of the Muses far below, seems to have been built on the site of an ancient Greek holy place; for sherds of ancient glazed pottery may still be found under the tumbled stones from the walls that now obstruct its floor.

A. R. BURN

THE GORTYN 'LABYRINTH' AND ITS VISITORS IN THE FIFTEENTH CENTURY

The 'Labyrinth' near Gortyn in southern Crete has attracted the interest and the curiosity of many generations of travellers visiting the island. When Tournefort explored it systematically in 1700 he observed and recorded the dates inscribed by visitors, who had sometimes added their names, on the rock-face, either at the farthest point which can be reached, or on the sides of the passage leading to it.[1] As the earliest date which he noted was 1444,[2] it may be of interest to draw attention to an even earlier literary source for such visits.

This is to be found in the treatise *De Orthographia* by the Italian humanist, Gasparino Barzizza (1370–1431),[3] who often styled himself Pergamensis from the town of Bergamo close to his native village Barzizza. In this work, which deals in particular with the correct Latin forms of words, including proper names, of Greek origin, the author displays only a limited acquaintance with the Greek language; and although held in high repute as a Latin scholar, frequently repeats, uncritically, incorrect spellings and fantastic derivations taken from such earlier works as the *Etymologiae* of Isidore of Seville, the *Catholicon* of Giovanni Balbi ('Januensis') of Genoa, or the *Vocabularium* of Hugutio of Pisa. The last two-thirds of his treatise consist of words mostly, but not exclusively, of Greek origin, arranged in alphabetical order, and it is the entry concerning the Labyrinth to which I would draw attention. I quote it from the earliest version of those that I have been able to consult, namely a MS. of *ca.* 1453, adding *variae lectiones* from two other MSS. and from the *Editio Princeps*. (Expanded abbreviations are given in italics.)

> 'Laberinth*us* per -th- carcer ut a poetis fingit*ur* discrimine uiar*um* i*m*plicitus. Reperitur etiam laberinthus i*n* Creta naturalis. non manu factus sub monte q*u*odam incredibili ambage uiar*um* implicitus. quem noui magistratus a Senatu Veneto in eam insulam missi hebreis ducibus accensis funalibus usq*ue* quo iter est p*er*u*ium* Inni su*n*t semp*er* cu*m* p*ri*mum insulam attigerunt.'

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[1] *Relation d'un Voyage du Levant*, par M. Pitton de Tournefort [Lyon, 1717, 8vo], I. pp. 76–83.

[2] Other dates in the fifteenth and sixteenth centuries which he noted were 1495, 1516, 'qui fu el strenuo Signor Zan da Como, cap.no de la Fanteria, 1526', 1539, 1560, 1579. I do not know of any published description by a traveller from the West earlier than that of Pierre Belon, *Observations sur plusieurs Singularitez*, bk. 1. ch. 6 [Paris, 1553], quoted by Tournefort.

[3] R. Sabbadini, *Studi Italiani* XI (1903), 364–8, concludes that Barzizza composed two versions of this treatise, the first at Padua, before he left it in 1421 (or 1422?), for the instruction of two young Venetian pupils; and the second at Milan between 1422 and 1430.

V. Ll. Ba.[4] stops short at ' implicitus.'
Bo.[5] ' actensis funalibus usq*ue* quo iter est peruium ' (ends).
Ed. Pr.[6] ' accensis funalibus usque quo iter est. peruiarunt ' (ends).

Inni sunt is obviously corrupt, and as a verb is required to govern *quem*, one might perhaps conjecture *inire solent*. It would appear that the editor of the *Ed. Pr.*, perhaps confronted with this, or another, corrupt reading, solved the problem by making *peruium* - - - into the verb *peruiarunt*.

The version quoted [7] seems to be closer to the earlier of the two versions of the *Orthographia* which Sabbadini distinguishes,[8] and thus takes us back to 1421/2 at the latest, for the practice of visiting the ' Labyrinth.' It is not surprising that Barzizza should have heard of such visits paid by the Venetian Governors, although he does not appear ever to have resided in Venice, but we cannot hope to trace the source of his information. It might possibly have come to him from his great friend Guarino, who spent several years there, but we may remember that Padua, where Barzizza held the Chair of Rhetoric from 1407 to 1421 (or 1422?), is so close to Venice that he must have had many pupils from that city, besides the two for whom he composed his *Orthographia*.[8]

It is perhaps worth adding that this allusion to Venetian Magistrates visiting the ' Labyrinth ' is not repeated in the *De Orthographia* of Giovanni Tortello, of Arezzo, a much more elaborate and scholarly work, composed some thirty years later under the patronage of Pope Nicolas V. It is not necessary to quote the relative entry here, but we may note that it spells *Labyrinthus* correctly, and is based on the well-known passage in Pliny, *NH* xxxvi, 13, 19; and also quotes several lines from Ovid, *Met.* viii. 159 ff.

A. M. Woodward

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[4] *Ba.* = Balliol College Library, No. 132 (now deposited in the Bodleian), which includes also 145 of Barzizza's letters.

[5] *Bo.* = Bodleian, *Canonici* Ms. No. 375 (paper, *ca.* 1500?). I am much indebted to Mr. R. W. Hunt, Keeper of Western MSS., for enabling me to examine these two MSS. There are, I believe, two more examples of the same work in the Canonici collection, but I had no time to see them.

[6] (Paris, Gering, Crantz and Friburger, 1470/71). Professor Louis Robert most kindly sent me a copy of the entry *Laberinthos* from the (unique?) copy in the Bibliothèque Nationale.

[7] From a MS., written probably at or near Naples, which is in my possession.

[8] See above, note (3).

AN EIGHT-SIDED MINOAN SEALSTONE IN THE ASHMOLEAN MUSEUM

The eight-sided prism of sardonyx, of which the eight faces are represented in Fig. 1, was acquired by Sir Arthur Evans in Eastern Crete, and is certainly of Cretan workmanship and Middle Minoan style.

All the signs are recorded already in *Scripta Minoa* I (Oxford, 1909) and are numbered there as follows:—

Sign numbers in *SM* I.				Sign groups already published in *SM* I.
×14	8	72		
13	58	18		
4	92	14	×	
5	12	73		
18	92	73	12	
92	30	19	×	P. 18c: P. 20e:[1] P. 23b: P. 25a: P. 30d
92	11b	44		P. 20a: P. 23a: P. 27b: P. 30a: P. 49a: P. 71a: P. 123:
×21	80	18		(18–21) P. 23c: P. 24b: (85–18–21) P. 29b [Bossert,[3] 514c.

92–19–30.

If the sealstone be held so that the signs 5 (eye), 19 (template), 30 (calipers), 80 (bird) are upright, the uppermost line (l. 1) has a punctuation-cross to left, and the lowest line (l. 8) has a cross also to left. The inscription is therefore to be read beginning from left to right (l. 1) and ending from right to left (l. 8). This is confirmed by the position of those signs which are set lengthways, top to left in ll. 1, 3, 5, 7; top to right in ll. 2, 4, 6, 8: and the bird (80) in l. 8 faces the direction of the writing. The only irregularity is that the axe (12) in l. 5 is set facing left like the similar sign in l. 4; but the shortened haft is in the reverse direction.

Besides the punctuation crosses in ll. 1, 8, there are crosses at the beginning of l. 3 and l. 6: but the dot appended to sign 92 in l. 6 is to be read as part of the sign. From these punctuation marks, it would appear that ll. 1–2–3, ll. 4–5, and ll. 6–7–8 are to be read as continuous words or phrases.

The inscription does not add anything to our list of signs, and not much to our knowledge of the vocabulary of the Hieroglyphic Script. What is notable, on the other hand, is the number of sign groups already known, and especially the association of those in ll. 6–7–8, which appear together on the ‘ cat-signet ’ *SM* I, p. 23 a, b, c; and ll. 6–7 which recur on the four-sided seal *SM* I, p. 30 a–d. The association of ll. 6–7–8 is confirmed by the punctuation marks.

These associated groups may be either proper names or formulae. Similarly the groups in ll. 1–2–3 and ll. 4–5 are associated as names or phrases by their punctuation: but they do not recur thus elsewhere.

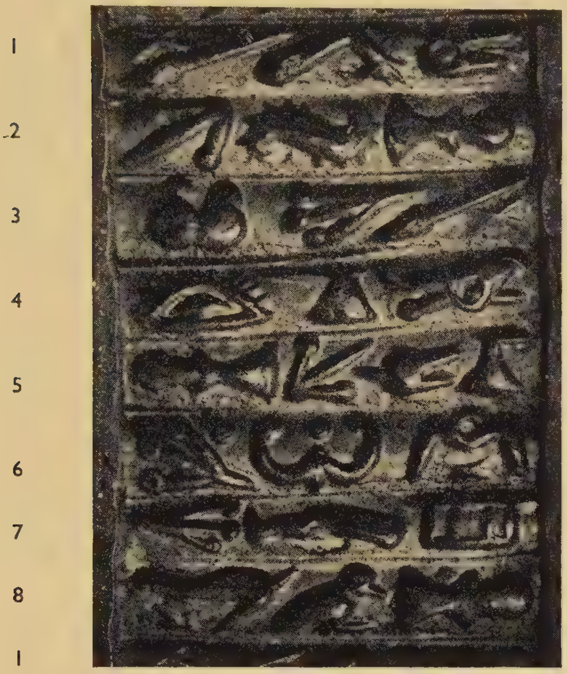

Fig. 1.—Impression from Eight-sided Sealstone in Ashmolean Museum. Scale 3 : 1. (Photo Ashmolean Museum.)

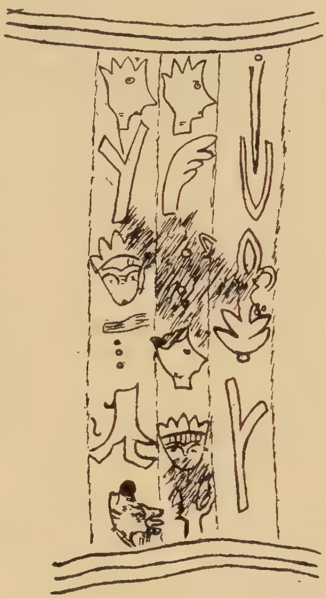

Fig. 2.—Inscription on Bronze Axe from Arkalokhori. Scale 2 : 1.

The only other long inscription in Hieroglyphic signs is on the votive axe from the cave-sanctuary at Arkalokhori (Fig. 2). It is in three vertical columns, of 6, 6, and 3 signs respectively. Evans noted that the signs were ' Cretan ', but they are in a different style from those of the sealstones, and most of them do not recur. It is only noted here on account of the arrangement of the signs; but the three columns are vertical, not boustrophedon.

J. L. Myres

THE GREEK THEATRE CAVEA: ADDENDA AND CORRIGENDA

The Olympia Stadium. A detailed publication of the German excavations at the Olympia stadium is given by E. Kunze and H. Schleif, *III. Olympiabericht* (in *JdI* 1941), 12 ff., pls. 2–5, 9–10.[1] This shows that the Greek καθέδρα, well preserved, consisted of a paved area, fenced round, on which wooden seats must have been placed at the time of the festival. This, and not the later extension, is the ' schlichte Steinpodium ' referred to in *BSA* XLIII, 159, n. 3.

As to the later extension,[2] which Kunze and Schleif date to approximately the first century A.D., it consists of two rows of eight stone benches each, nearly 11 metres apart, surrounded on three sides by a stone parapet. The space between the stone benches must have been filled with wooden benches. Pausanias will naturally have seen both the original καθέδρα and this extension; but Kunze [3] suggests that the term γῆς χῶμα is nevertheless suitable as applied to the stadium as a whole, of which the καθέδρα and its extension formed only a relatively small part.

Acoustics. The acoustic properties of the Greek theatre are well discussed by H. Bagenal and A. Wood, *Planning for Good Acoustics* (1931), pp. 342 ff.[4] ' The excellence of the Greek theatre,' they write, ' was due to three contributing factors: (i) the sound was intensified near the source by a number of useful reflectors [5]; (ii) the passage from speaker to listener was kept clear and free from obstacles [6]; (iii) there were no disturbing reflected paths back from listeners to stage.' Later they add: ' Since there was no roof to the Greek theatre, the reverberation was nearly as short as in the open air, and therefore there was no loss of distinctness with increase of loudness.' Thus it is not so much the perfect proportions [7] of Epidauros as the above factors which make its acoustics good; though they do not quite explain why the acoustics in certain well-preserved Greek theatres are not so good. The raising of the height of the logeion will have helped the speaker in a large theatre.

---

[1] This was unfortunately not available to me at the time of writing. My thanks are due to Prof. Kunze for giving me information and suggestions.

[2] *BSA* XLIII, 159 ff., fig. 9; *III. Olympiabericht*, 15: ' Das Podium ist von einer merkwürdigen Sitzbankanlage umbaut, die eine Mischung darstellt zwischen ständiger Einrichtung aus Stein und einem Provisorium aus Holz, das nur alle vier Jahre zu den Spielen aufgeschlagen wurde.' It seems possible, however, that this wooden section was a permanent construction.

[3] This point is discussed in his letter to me.

[4] Unfortunately the writers rely too much on obsolete text-books for their knowledge of the Greek odeum and theatre. It would, for example, have helped their discussion of odeum acoustics to have known that the Odeum of Pericles had been excavated. One may also doubt whether periaktoi (*op. cit.*, 348) could possibly have reflected the actor's voice out into the cavea.

[5] *E.g.*, the back wall of the logeion. Good reflectors must produce reflections which follow the direct sound closely enough ($\frac{1}{20}$ sec.) to reinforce rather than confuse it; for this purpose reflecting surfaces must not be more than 30 ft. from the source of sound.

[6] On p. 192 they add: ' Owing to the ramp of the seats, sound struck the listener at a wide angle.'

[7] *BSA* XLIII, 138.

Ἠχεῖα. J. Durm, *Die Baukunst der Griechen*, p. 216 gives a conjectural reconstruction of ἠχεῖα behind the diazoma wall. Bagenal and Wood[8] make the interesting point that the tradition of acoustic vases continued into the Middle Ages, several having been found under mediaeval churches.

O. A. W. Dilke

[8] *Op. cit.*, 345 and n. 2.

NOTICE TO CONTRIBUTORS

Contributors to the *Annual of the British School at Athens* are asked to observe the following rules in the preparation of articles:

1. TRANSLITERATION

A. *Ancient Greek*

(*a*) Except in the cases mentioned in paragraphs (*b*) and (*c*) below, all ancient Greek names and words should be transliterated according to the following table:

α = a
β = b
γ = g
γγ = ng
γκ = nk
γχ = nch
δ = d
ε = e
ζ = z
Rough breathing = h

η = e
θ = th
ι = i
κ = k
λ = l
μ = m
ν = n
ξ = x
ο = o

π = p
ρ = r
σ = s
τ = t
υ = y after a consonant, u after a vowel.
φ = ph
χ = ch
ψ = ps
ω = o
ῥ = rh

Iota subscript should not be indicated.
Accents should not be indicated.

(*b*) In rendering Greek proper names, if there is a recognised Latin transliteration, this should be used in preference to one made in accordance with paragraph (*a*): *e.g.*, Bacchus not Bakchos, Boeotia not Boiotia. Lewis and Short's *Latin Dictionary* may conveniently be used as authority for the existence of a recognised Latin transliteration.

Where the Latin transliteration of a name has alternative forms for the final syllable, the one closer to the Greek should be used, *e.g.*, Philoctetes not Philocteta. But in Greek names ending in -ων, for which there are alternative Latin forms ending in -on or -o, the -o termination should be used if already established by English usage; *e.g.*, Plato, Pluto, Philo.

The Latin form of a proper name should not be used if in any other syllable than the last it differs from the Greek form by more than those changes of letter which Latin regularly makes in transliterating Greek; *viz.* c for κ, th for θ, ph for φ, ch for χ, ps for ψ, ae for αι, oe for οι, u for ου. In such cases the Greek form should be transliterated in accordance with paragraph (*a*). Thus Tarentum, Metapontum, Agrigentum, Regium, etc. should not be used of the pre-Roman cities of Taras, Metapontion, Akragas, Rhegion, etc.; and it is hardly necessary to add that Hercules and Ulysses are not interchangeable with Herakles and Odysseus.

(*c*) Certain Greek proper names which have become established in English in unclassical forms should not be otherwise transcribed. The following list may serve as a guide:

Aesop
Aristotle
Athens
Centaur
Corinth
Chrysostom
Euclid
Galen
Ganymede
Helen
Herodian
Hesiod
Homer
Jason
Jocasta
Lucian
Maenad
Nereid
Peloponnese
Philip
Pindar
Plutarch
Priam
Ptolemy
Rhodes
Samothrace
Sibyl
Syracuse
Thebes
Thessaly
Thrace
Troad
Troy
Tyre

B. *Modern Greek*

The system adopted by the Permanent Committee on Geographical Names will be used for modern Greek place names:

Greek Letter or Combination.	New Transliteration.	Notes.
α	a	
αι	ai	
αυ	av	
β	v	
	b	In transliteration of foreign words.
γ	y	Before soft vowels (αι, ε, ει, η, ι, οι, υ, υι).
	g	Before hard vowels (α, ο, ου, ω) and before all but palatal consonants (γ, κ, ξ, χ).
	n	Before palatal consonants (γ, κ, ξ, χ).
	g	After γ.
γκ	g	Initially, and in foreign words always.
	ng	Medially.
δ	dh	
	d	In words of foreign origin.
ε	e	
ει	i	
ευ	ev	
ζ	z	*Cf.* τζ.
η	i	
ηυ	iv	
θ	th	
ι	i	
κ	k	Except after γ: see γκ.
λ	l	
μ	m	
μπ	b	Initially, and in foreign words always.
	mb	Medially.
ν	n	
ντ	d	Initially, and in foreign words.
	nd	Medially.

Greek Letter or Combination.	New Transliteration.	Notes.
ντζ	ntz	See τζ for distinction.
	nj	
ξ	x	
ο	o	
οι	oi	
ου	ou	
	u	Representing Cyrillic y or modern Turkish **u**.
π	p	Except after μ: see μπ.
ρ, ῥ	r	
σ, ς	s	*Cf.* τσ.
	sh	In some words of foreign origin.
στ	st	
	sht	Representing Bulg. щ.
τ	t	Except after ν: see ντ.
τζ	tz	
	j	In some foreign words, representing Alb. xh, Russ. and Bulg. дж, Serb. џ, Croat dż, mod. Turk. c.
τσ	ts	
	ch	In some foreign words representing Alb. ç, Cyr. ч, Croat č, mod. Turk. ç.
υ	i	Except as follows.
	v	After α, ε, η.
		After ο: see ου.
υι	i	
φ	f	
χ	kh	
	h	In some foreign words.
ψ	ps	
ω	o	
ʽ	omit	

Stress will be indicated by an acute accent.

C. *Transliteration of Turkish names*

Modern Turkish names should be spelt in the Turkish way; *e.g.*, Konya, Kayseri, Bursa, Sakça Gözü (not Sakje-Geuzi).

In referring to earlier periods, earlier forms of these names may be used, *e.g.*, Sinope instead of the modern Sinop.

The Editors are authorised to correct manuscripts and proofs in accordance with these schemes, except in the case of a special protest from a contributor. All contributors therefore who object on principle to the foregoing systems are requested to inform the Editors of the fact when forwarding contributions to the *Annual*.

2. References to Modern Authors

In giving references, names of authors should not be underlined for italics; titles of books, periodicals, or other collective publications should be underlined. If it is necessary to cite the title of an article appearing in a periodical or collective publication, it should not be underlined but enclosed within single inverted commas.

Volume numbers should be given in large Roman numerals. If it is necessary to give the year as well, it should follow the volume number and be enclosed in round brackets.

Reference to the page number should be given as a number only, unpreceded by ‘ p.’ unless this is necessary to avoid confusion.

Op. cit., *loc. cit.*, *id.*, *ibid.* should be used, as appropriate, whenever references are repeated at short intervals, but the full reference should be given again if the interval is greater than 1000 words or if two or more works by the same author are under reference in one passage.

3. Underlining for Italics

(i) *Op. cit.*, *loc. cit.*, *id.*, *ibid.*, etc. should normally be underlined.
Cf., *i.e.*, *e.g.* should be underlined unless followed immediately by an italicised word.
S.v. should be underlined, and the word referred to put in single inverted commas.

(ii) Quotations from foreign languages in the Roman alphabet should be underlined.

(iii) Foreign words which have not become current in English should be underlined, e.g., *aphlaston* (but lekythos).

4. Abbreviations

In addition to those already mentioned the following should normally be used in references both in the text and notes:

b.f. for black-figure
fig. for figure
fr. for fragment
l. for line
n. for note

no. for number
p. for page
pl. for plate
r.f. for red-figure.

In references to illustrations of the current volume of the *Annual* small capitals should be used for PLATE and FIG.

The following abbreviations for periodicals and standard publications should also be used:

AA = *Archäologischer Anzeiger.*
ActArch = *Acta Archaeologica.*
AD = *Antike Denkmäler.*
ADelt = ’Αρχαιολογικὸν Δελτίον.
AdI = *Annali dell’ Instituto.*
AE = ’Αρχαιολογικὴ ’Εφημερίς.
AJ = *Antiquaries’ Journal.*
AJA = *American Journal of Archaeology.*

AJP = *American Journal of Philology.*
AM = *Mitteilungen des deutschen archäologischen Instituts, Athenische Abteilung.*
Ann. = *Annuario d. R. Scuola Archeologica di Atene.*
ARV = J. D. Beazley, *Attic Red-Figure Vase-Painters.*
AZ = *Archäologische Zeitung.*
BCH = *Bulletin de Correspondance Hellénique.*
BdI = *Bullettino dell' Instituto.*
BJ = *Bonner Jahrbücher.*
BMC = *British Museum Catalogue of . . .*
BMQ = *British Museum Quarterly.*
BPI = *Bullettino di Paletnologia Italiana.*
BSA = *Annual of the British School at Athens.*
BSR = *Papers of the British School at Rome.*
BullMetrMus = *Bulletin of the Metropolitan Museum of Art.*
CAH = *Cambridge Ancient History.*
CIG = *Corpus Inscriptionum Graecarum.*
CIL = *Corpus Inscriptionum Latinarum.*
CQ = *Classical Quarterly.*
CR = *Classical Review.*
CVA = *Corpus Vasorum Antiquorum.*
DA = Daremberg and Saglio, *Dictionnaire des Antiquités.*
EB = *Encyclopaedia Britannica* (14th edn.).
FGH = F. Jacoby, *Fragmente der griechischen Historiker.*
FHG = Müller, *Fragmenta Historicorum Graecorum.*
FLMV = A. Furtwängler and Loeschcke, *Mykenische Vasen.*
FR = A. Furtwängler and K. Reichhold, *Griechische Vasenmalerei.*
GGA = *Göttingische Gelehrte Anzeigen.*
HarvSt = *Harvard Studies in Classical Philology.*
HbKlAlt = *Handbuch der klassischen Altertumswissenschaft.*
HN^2 = B. V. Head, *Historia Numorum* (2nd ed.).
IG = *Inscriptiones Graecae.*
IGR = *Inscriptiones Graecae ad res Romanas pertinentes.*
ILN = *Illustrated London News.*
JdI = *Jahrbuch des deutschen archäologischen Instituts.*
JEA = *Journal of Egyptian Archaeology.*
JHS = *Journal of Hellenic Studies.*
JRAI = *Journal of the Royal Anthropological Institute.*
JRIBA = *Journal of the Royal Institute of British Architects.*
JRS = *Journal of Roman Studies.*
LAAA = *Annals of Archaeology and Anthropology of the University of Liverpool.*
LS^9 = Liddell and Scott. *Greek Lexicon* (9th ed.).
MA = *Monumenti Antichi pubblicati a cura . . . dei Lincei.*
MAMA = *Monumenta Asiae Minoris Antiqua.*
MemAmAc = *Memoirs of the American Academy at Rome.*
MJb = *Münchner Jahrbuch der bildenden Kunst.*
Mon Inst = *Monumenti dell' Instituto.*
Mon Piot = *Monuments . . . Piot.*
MuZ = E. Pfuhl, *Malerei und Zeichnung der Griechen.*
NS = *Notizie degli Scavi di Antichità.*
Num Chron = *Numismatic Chronicle.*
Num Zeit = *Numismatische Zeitschrift.*
OGI = Dittenberger, *Orientis Graeci Inscriptiones Selectae.*
ÖJh = *Jahreshefte des oesterreichischen archäologischen Instituts.*
OpArch = *Opuscula Archaeologica.*
PAE = Πρακτικὰ τῆς Ἀρχαιολογικῆς Ἑταιρείας.

PEQ = *Palestine Exploration Quarterly.*
PhW = *Philologische Wochenschrift.*
PM = A. Evans, *The Palace of Minos at Knossos.*
PZ = *Prähistorische Zeitschrift.*
QDAP = *Quarterly of the Department of Antiquities of Palestine.*
RA = *Revue Archéologique.*
RE = Pauly-Wissowa-Kroll, *Realencyclopädie.*
REA = *Revue des Études Anciennes.*
REG = *Revue des Études Grecques.*
Rend Linc = *Rendiconti della R. Accademia dei Lincei.*
RendPontAc = *Atti della Pontificia Accademia Romana di Archaeologia: Rendiconti.*
RhMus = *Rheinisches Museum.*
RM = *Mitteilungen des deutschen archäologischen Instituts, Römische Abteilung.*
Roscher = Roscher, *Lexikon der Mythologie.*
SCE = *Swedish Cyprus Expedition.*
SE = *Studi Etruschi.*
SEG = *Supplementum Epigraphicum Graecum.*
SIG = Dittenberger, *Sylloge Inscriptionum Graecarum.*
TAM = *Tituli Asiae Minoris.*
TAPA = *Transactions and Proceedings of the American Philological Association.*
YWCS = *Year's Work in Classical Studies.*

Abh = Abhandlungen.
Ac = Academy (etc.).
Ak = Akademie.
Ann = Annual.
Anz = Anzeiger.
Boll = Bollettino.
Bull = Bulletin, Bullettino.
Cat = Catalogue.
Coll = Collection.
C Rend = Comptes Rendus
Erg = Ergänzungsheft.
Inst = Institute (etc.).
J = Journal.
Jb = Jahrbuch.
Mem = Memoirs, Memorie, etc.
Mus = Museum.
Proc = Proceedings.
Rend = Rendiconti.
Rev = Review, Revue.
Riv = Rivista.
SB = Sitzungsberichte.
Suppl = Supplement (etc.).
Trans = Transactions.

If other abbreviations are used they should be indicated clearly in a footnote on the first page of the article.

5. Transliteration of Inscriptions

[ ] enclose letters believed to have been inscribed on the stone, but now lost.
{ } enclose superfluous letters inscribed on the stone by an error of the engraver.
⟨ ⟩ enclose letters accidentally omitted or wrongly inscribed by the engraver.
( ) enclose letters deliberately omitted by the engraver for the sake of abbreviation.
[[ ]] enclose letters erased in antiquity.
. . . represent lost letters equal in number to the dots.
- - - represent an unknown number of lost letters.

Dots placed under letters indicate that the reading is uncertain.
Where the stone has iota adscript, it should be printed as such; otherwise it should be supplied as subscript.
The aspirate sign, if it appears on the stone, should be represented by ⊢.

6. GENERAL

In view of the greatly increased costs of printing and production, contributors are requested to conform carefully with the above rules, to submit clean, carefully revised copy in typescript, and to pay particular care to the accuracy of Greek texts quoted and to accents and breathings.

In normal cases one proof only will be submitted to contributors, and page proofs will not be sent.

Author's corrections and additions in proof, above a figure of 10*s.* per galley, will be a charge on the author.

Contributors will receive twenty-five offprints. If they wish for more, they should ask for them before publication and will be required to bear the cost of printing the additional number.

Contributions or communications for the Editors should be sent to The Director, The British School at Athens, Athens, Greece, or to Dr. R. J. Hopper, Department of Ancient History, The University, Sheffield. Business communications should be sent to The Secretary, The British School at Athens, 50 *Bedford Square, London, W.C.*1.

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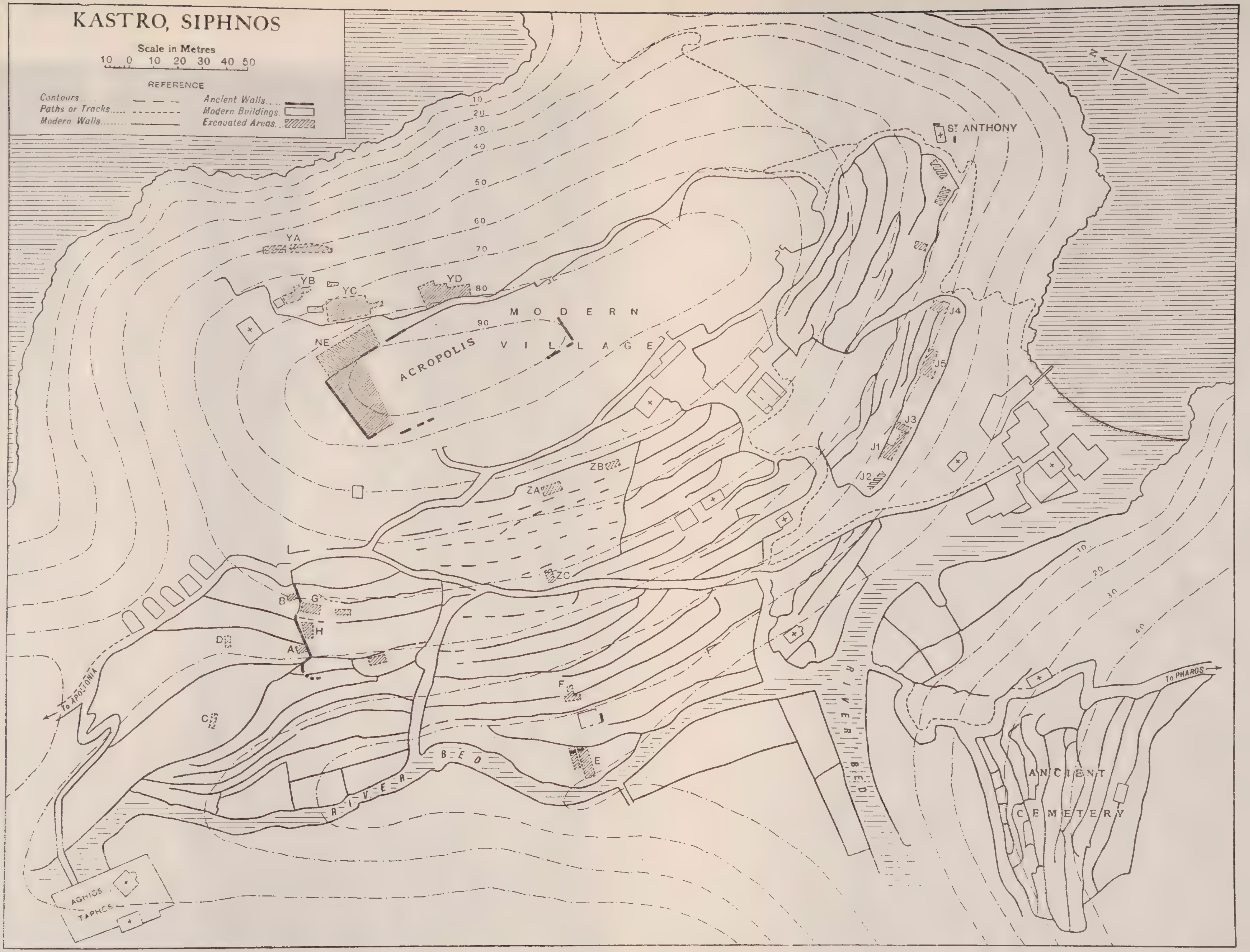
KASTRO, SIPHNOS
Scale in Metres
10 0 10 20 30 40 50
REFERENCE
Contours
Paths or Tracks
Modern Walls
Ancient Walls
Modern Buildings
Excavated Areas
N
ST ANTHONY
10
20
30
40
50
60
70
80
90
YA
YB
YC
YD
NE
ACROPOLIS
MODERN VILLAGE
J1
J2
J3
J4
J5
ZA
ZB
ZC
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RIVER BED
To PHAROS
ANCIENT CEMETERY
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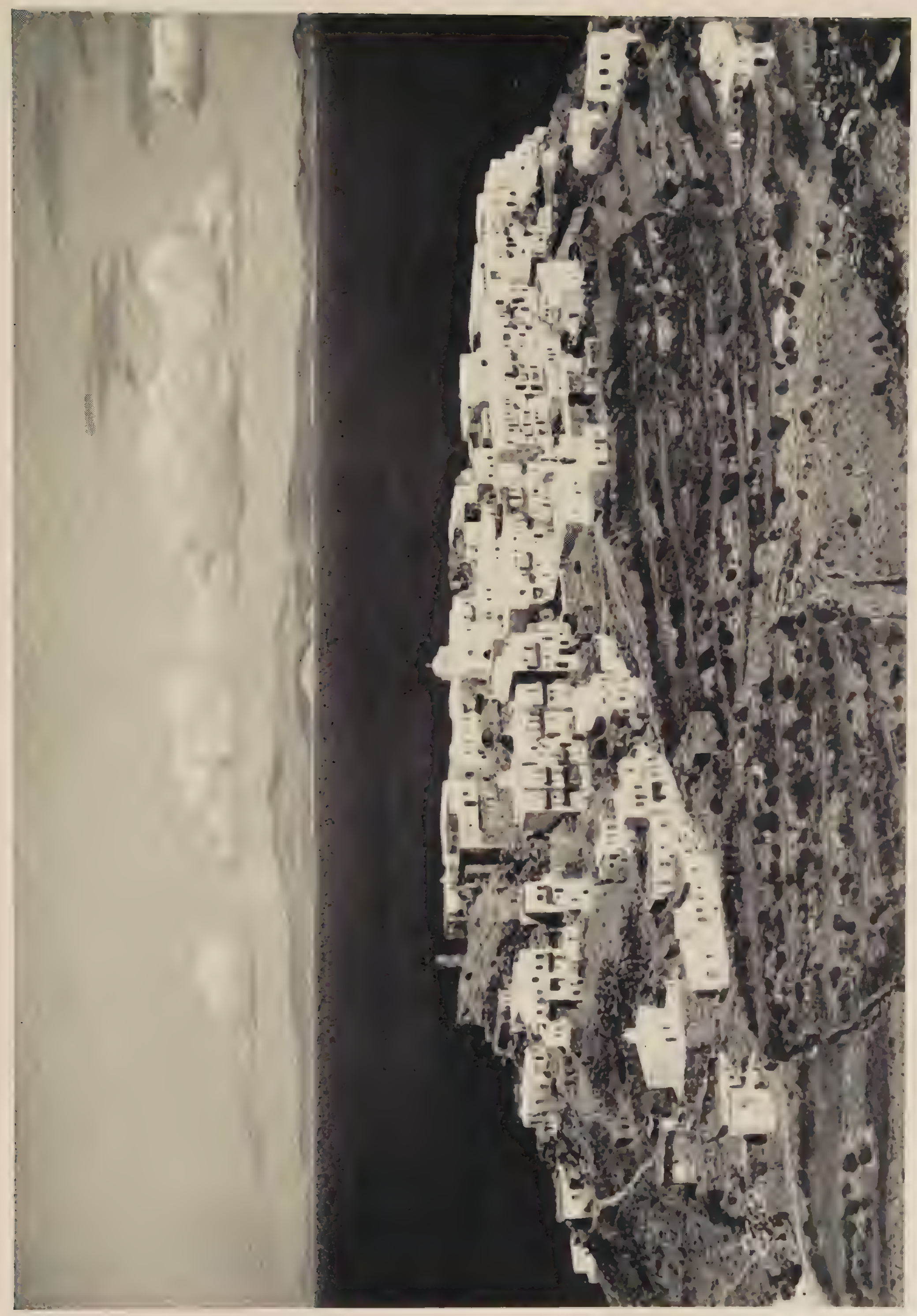

KASTRO, SIPHNOS, LOOKING EAST. PAROS AND ANTIPAROS IN THE DISTANCE.

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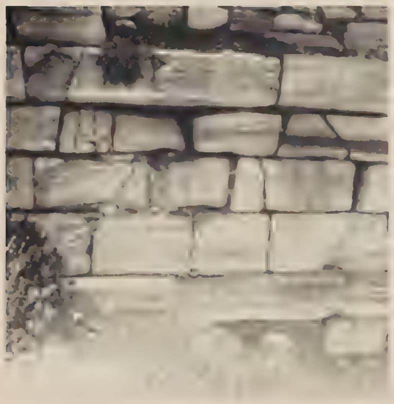

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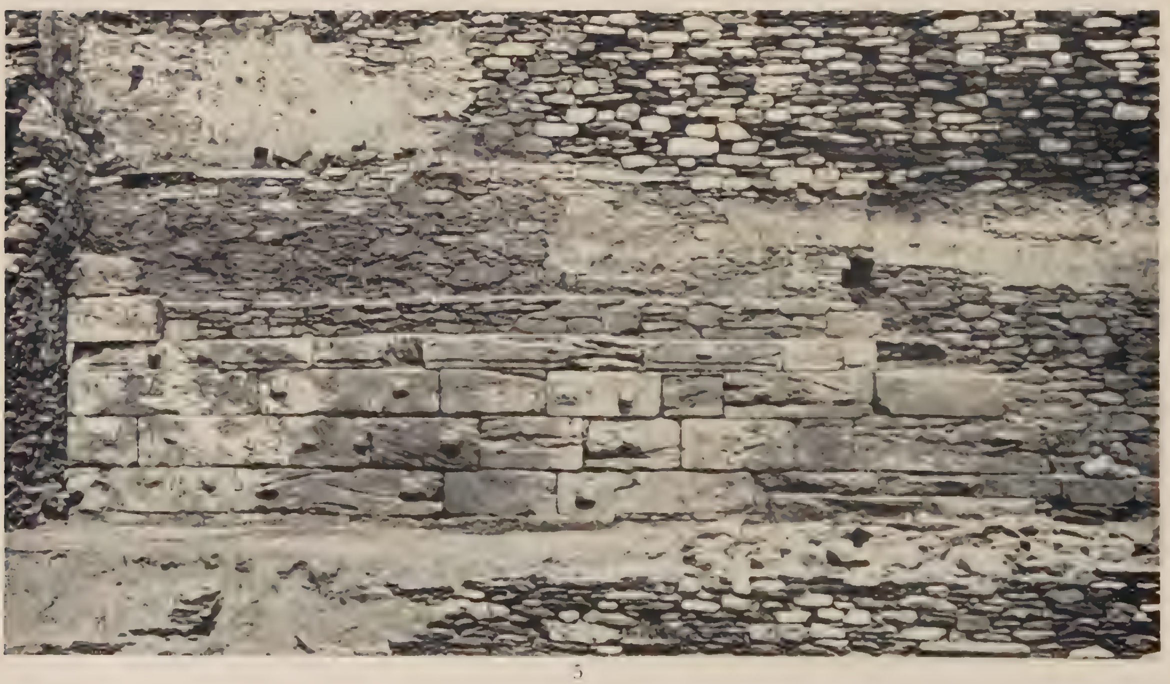
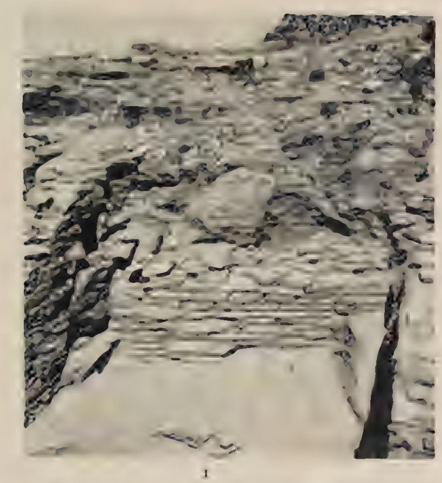


5

SIPHNOS: 1, KASTRO FROM S.W.: 2, N.E. SLOPE OF ACROPOLIS; 3, ACROPOLIS WALL, N.W. END: 4, N.W. END OF ACROPOLIS; 5, ACROPOLIS WALL, S.E. END.



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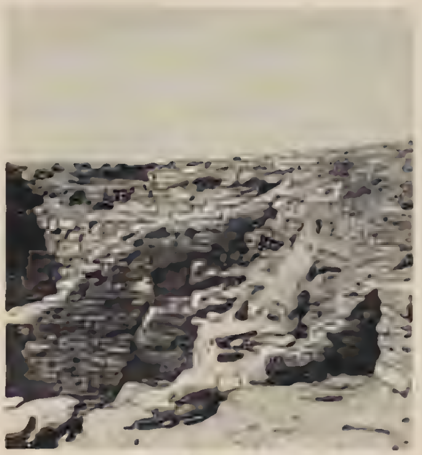

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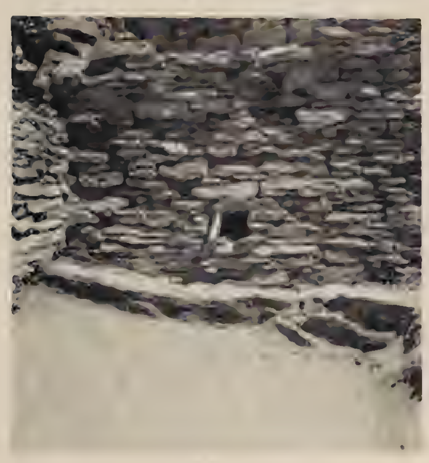

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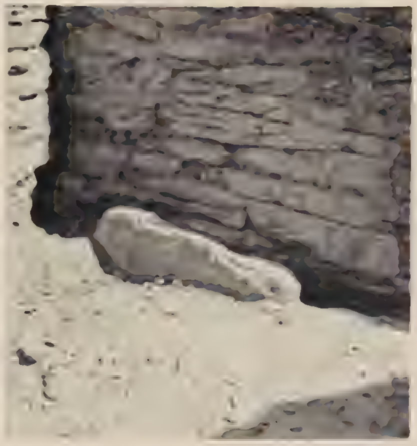

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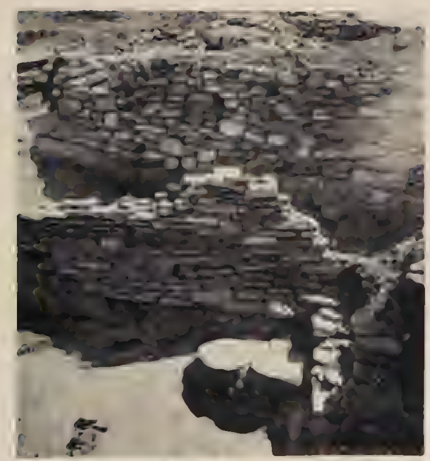

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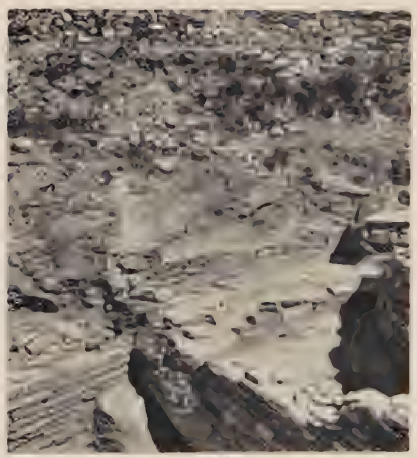

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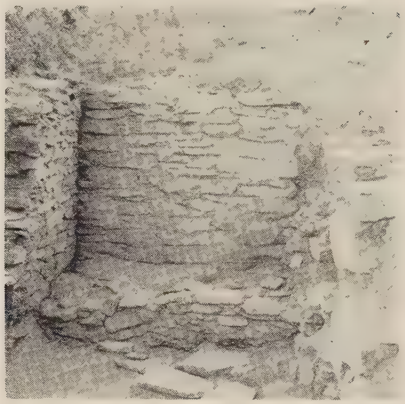
SIPHNOS. GEOMETRIC HOUSES ON ACROPOLIS.



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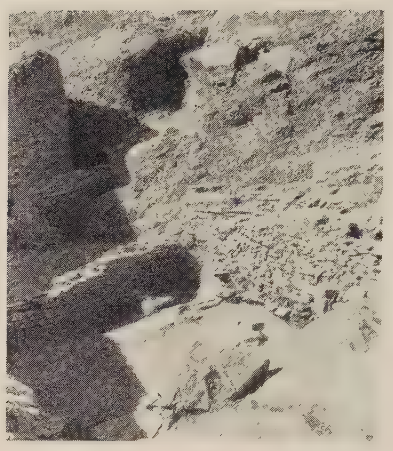

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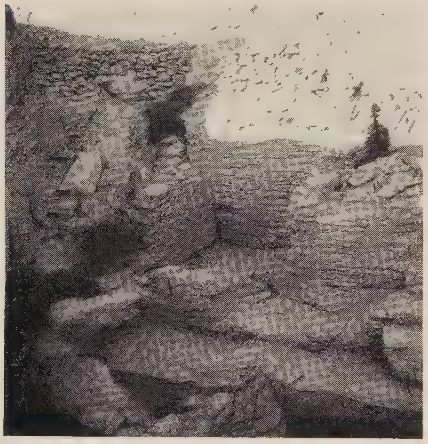

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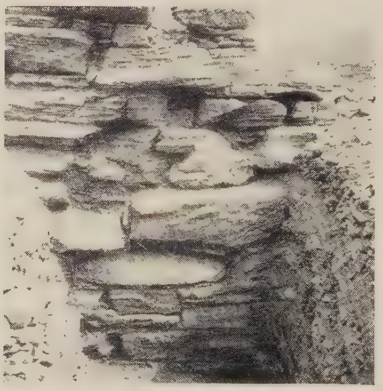

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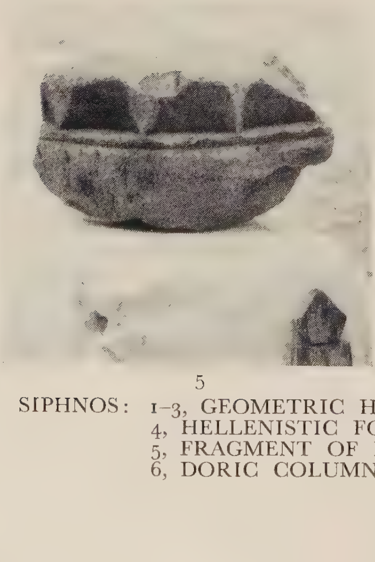

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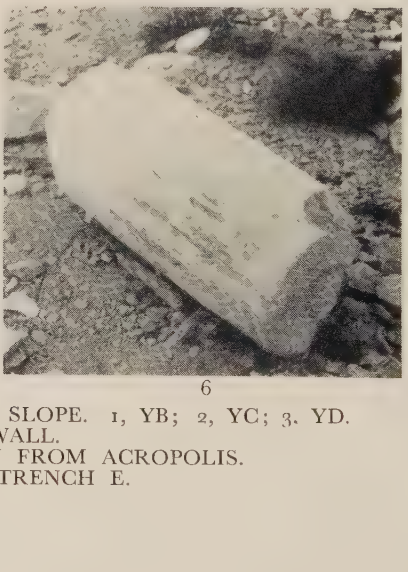

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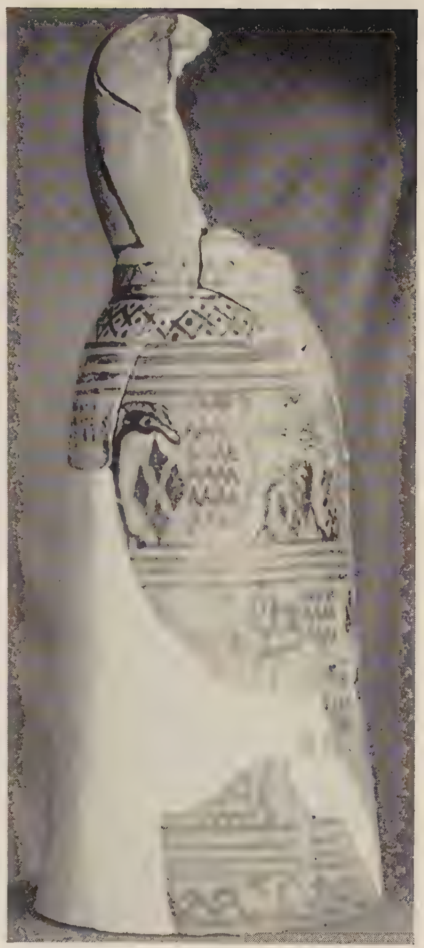
SIPHNOS: 1–3, GEOMETRIC HOUSES ON N.E. SLOPE. 1, YB; 2, YC; 3. YD.
4, HELLENISTIC FORTIFICATION WALL.
5, FRAGMENT OF DORIC COLUMN FROM ACROPOLIS.
6, DORIC COLUMN DRUM FROM TRENCH E.



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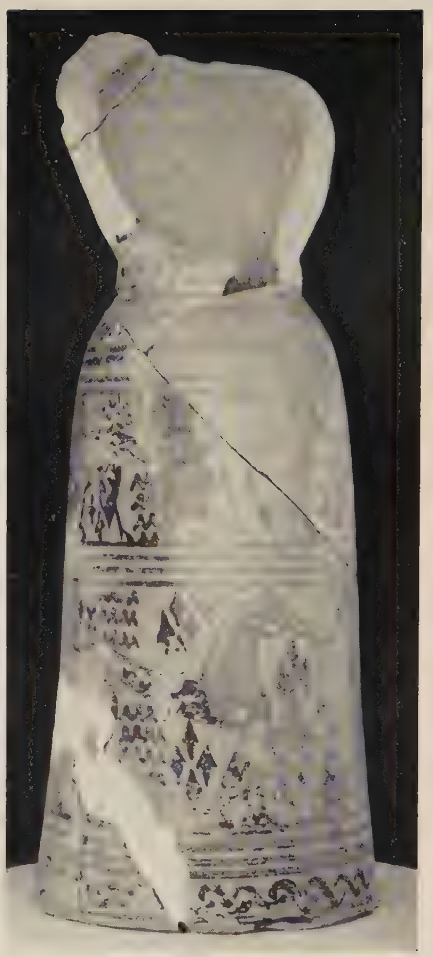

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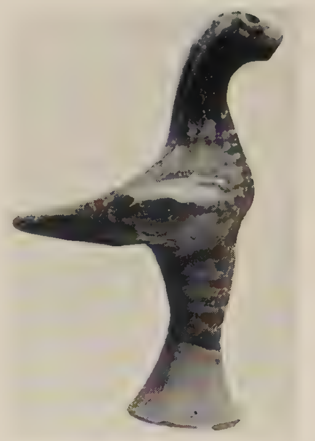

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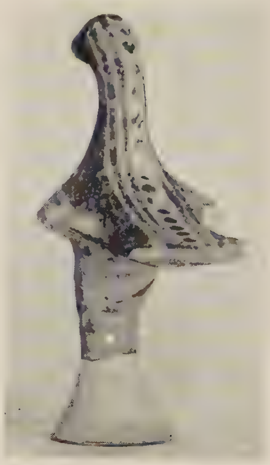

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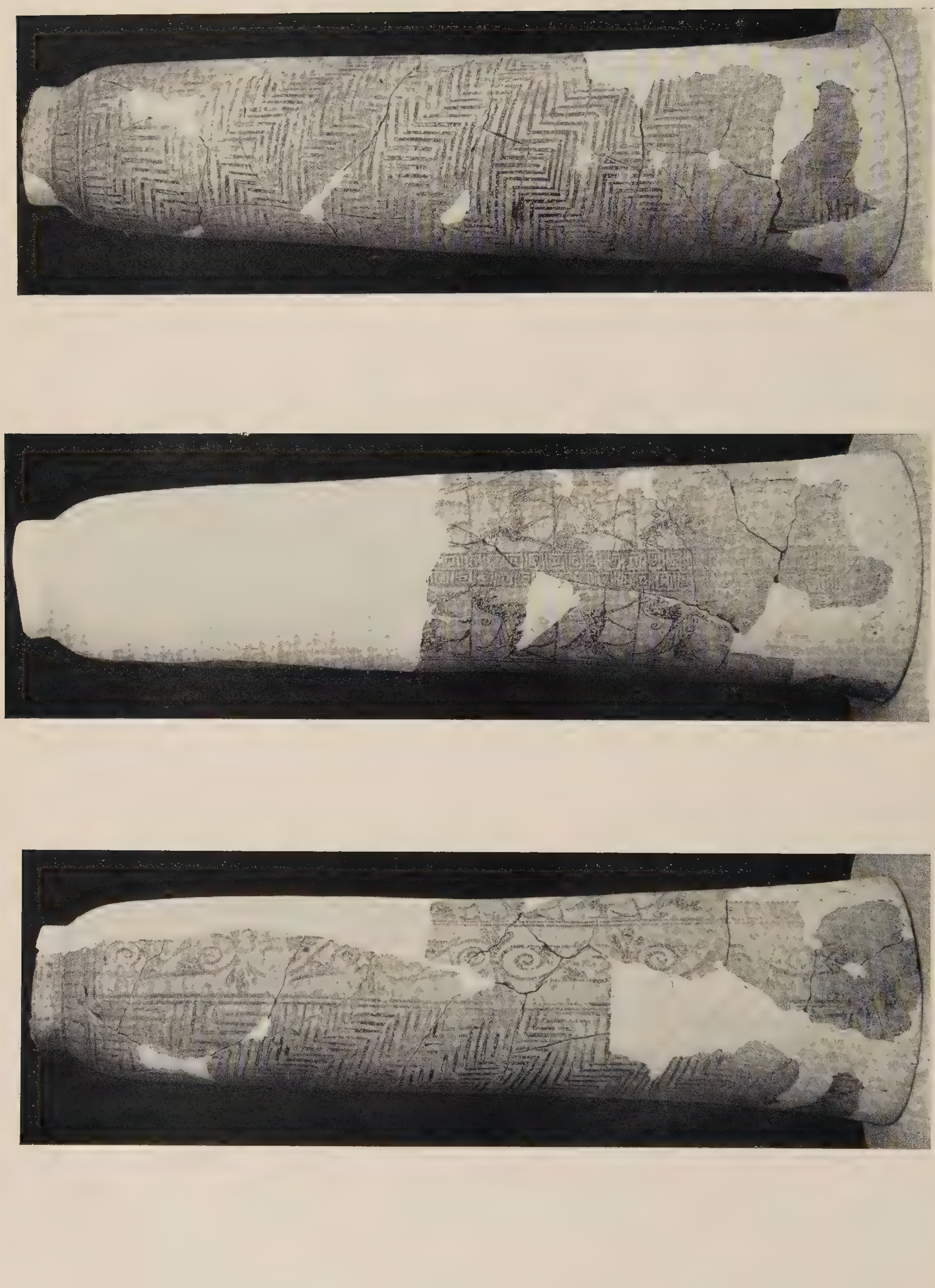

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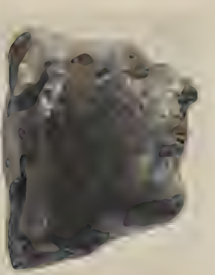
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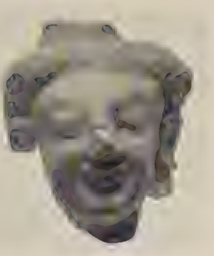
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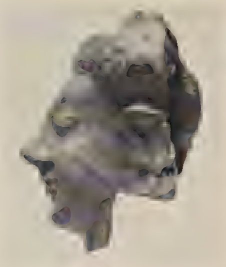
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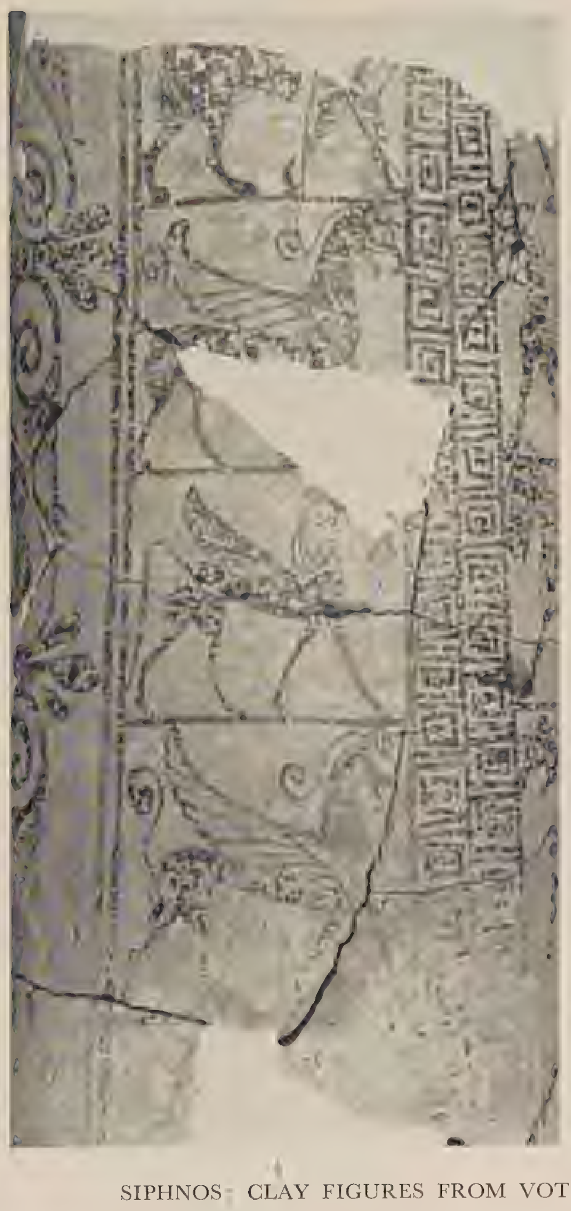
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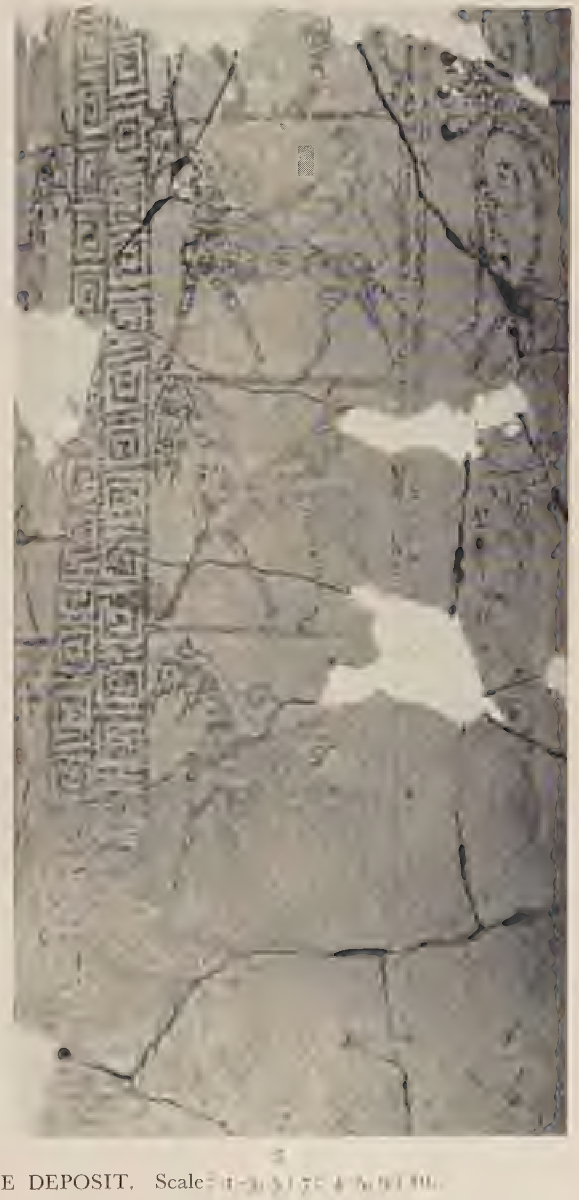
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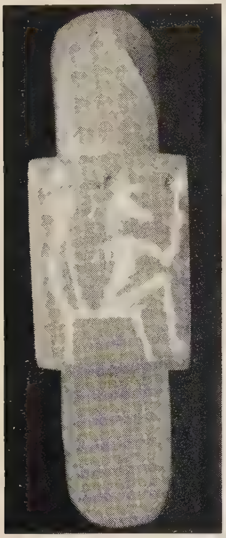
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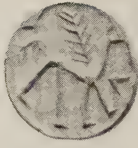
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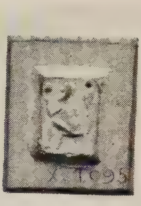
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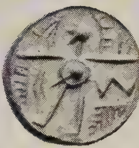
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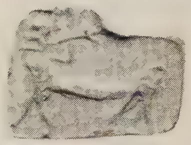
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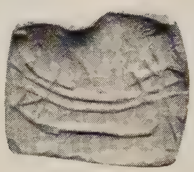
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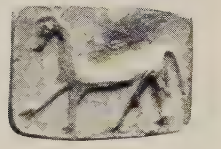
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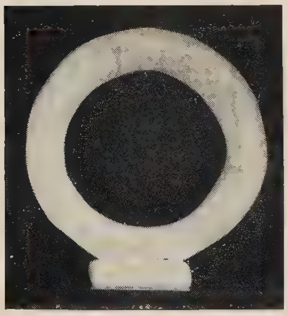
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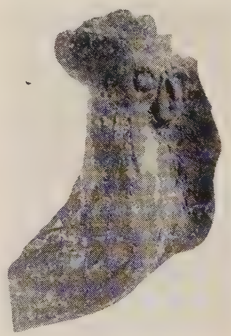
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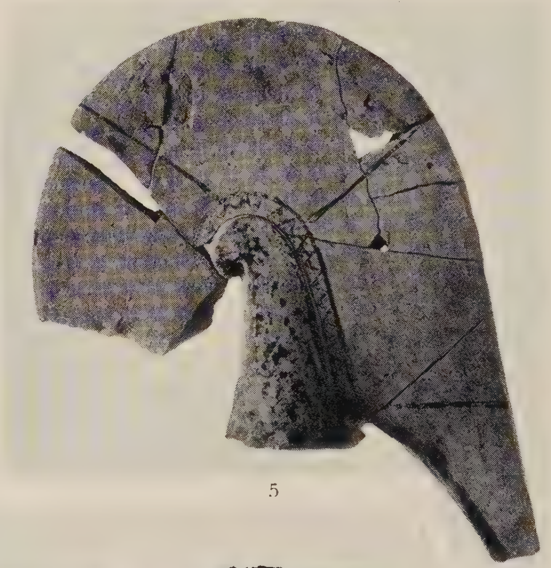
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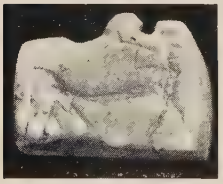
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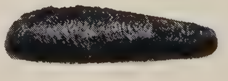
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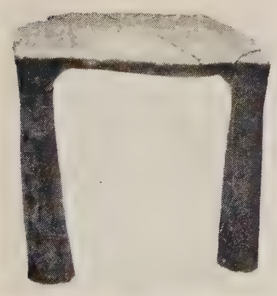
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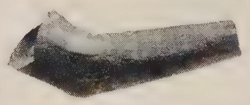
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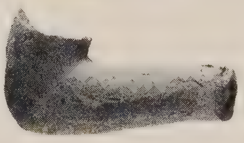
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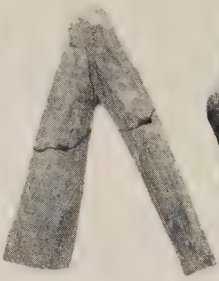
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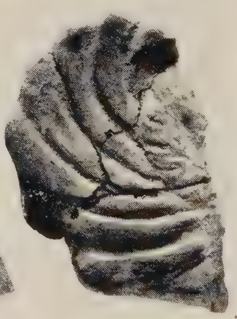
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SIPHNOS: STONE AND CLAY FROM VOTIVE DEPOSIT (except 2–4 and 12).
Scale: 1*a*, 5 : 2; 1*b*, 2, 3*a*–*c*, 9 : 10; 1*c*, 6 : 5; 3*d*, 1 : 1; 4, 5 : 7; 5, 7–11, 4 : 9; 6, 1 : 2; 12, 4 : 7.

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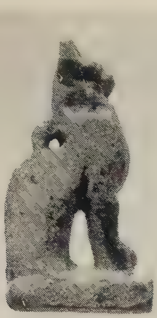

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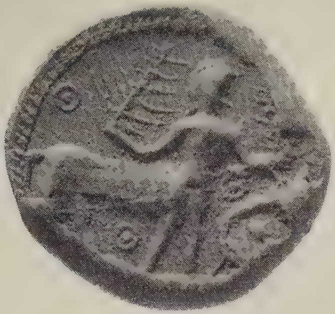

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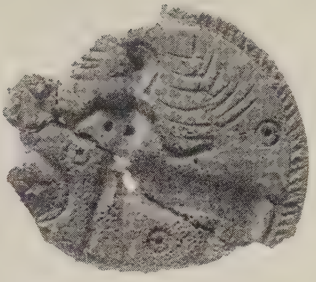

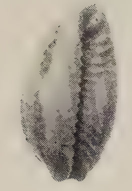

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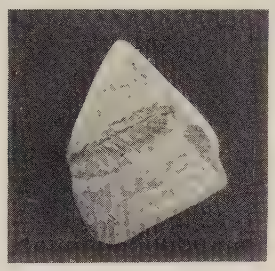

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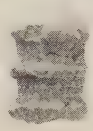

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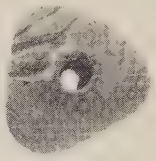

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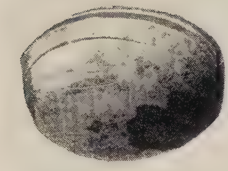

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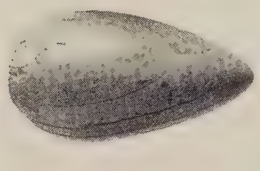

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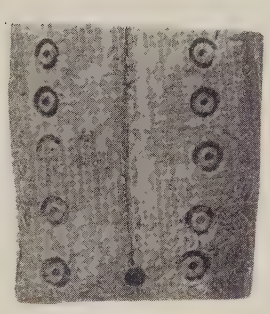

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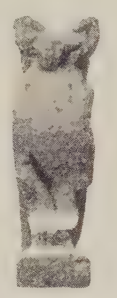

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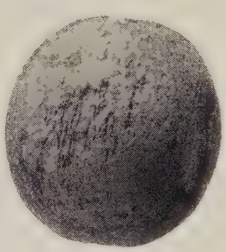

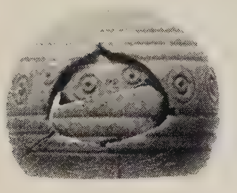

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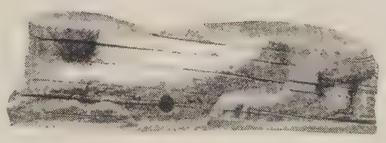

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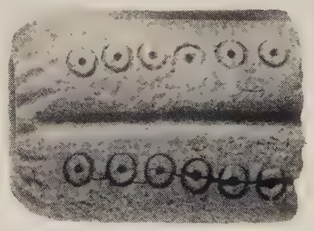

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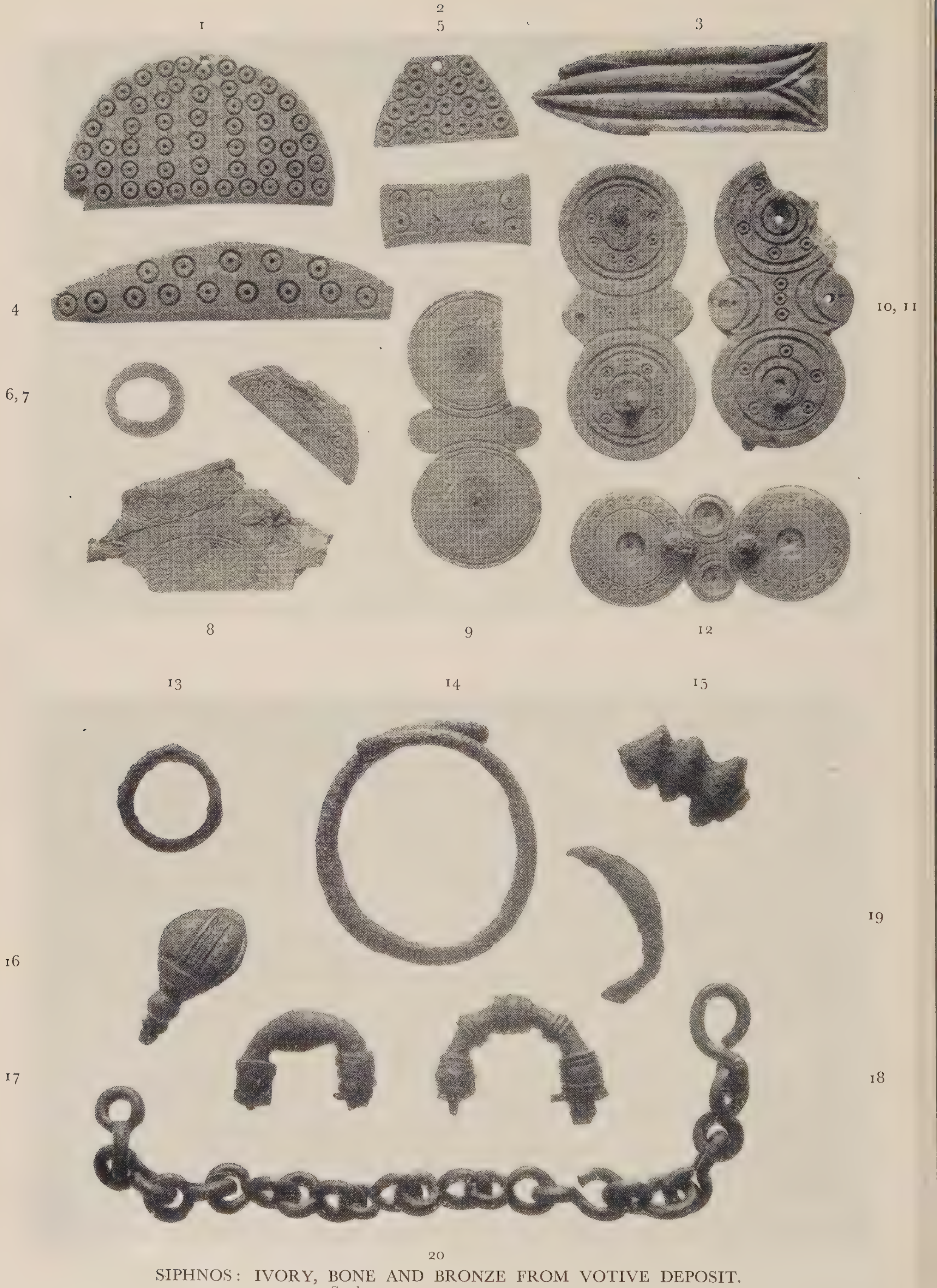
SIPHNOS: IVORY AND BONE FROM VOTIVE DEPOSIT. Scale 1 : 1.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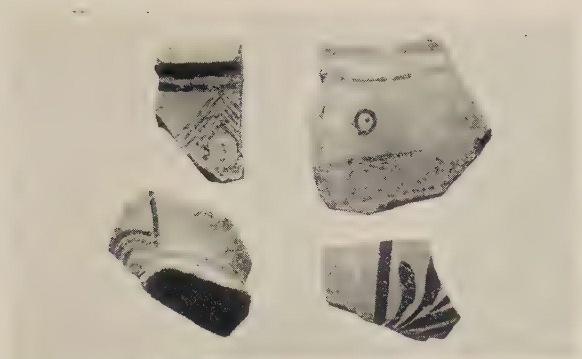
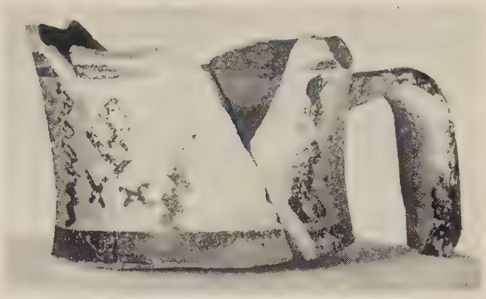
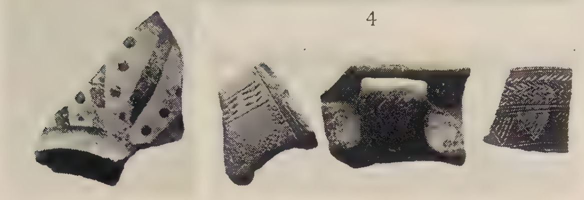
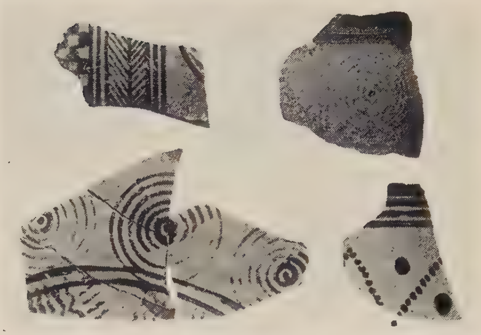
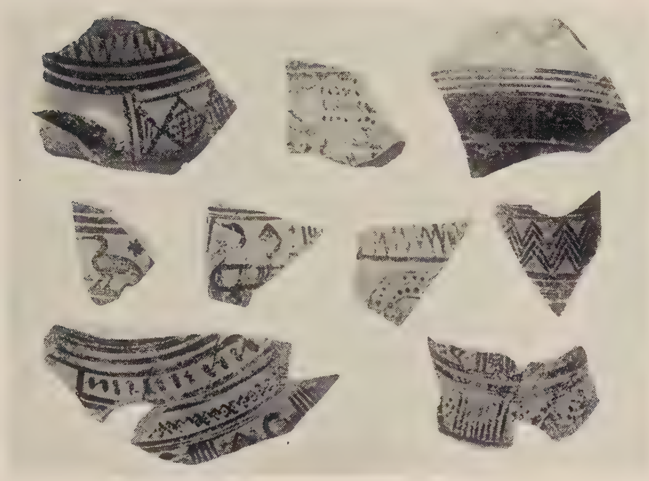
SIPHNOS: IVORY, BONE AND BRONZE FROM VOTIVE DEPOSIT.
Scale: 1-12, 1:1; 13 20, 3:4.







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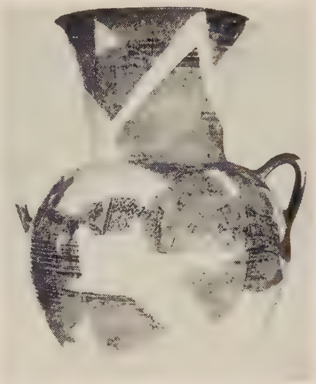

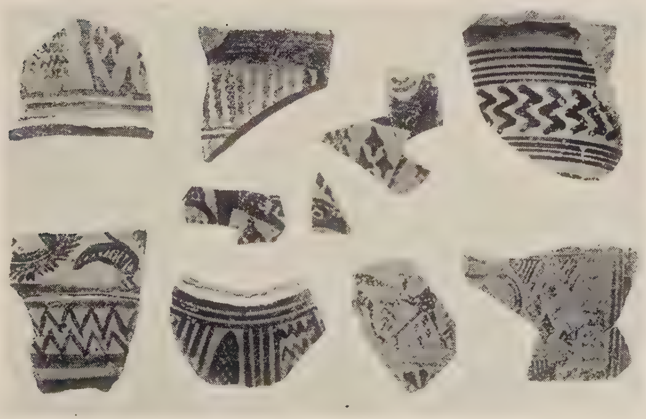
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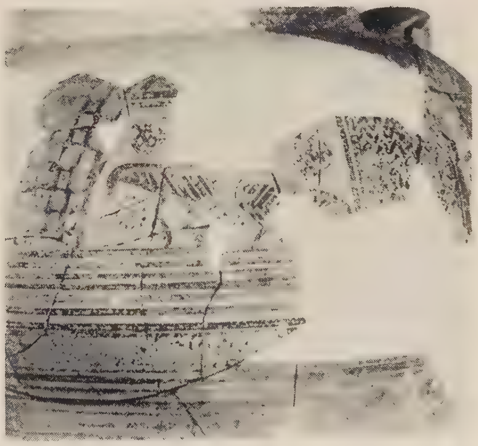
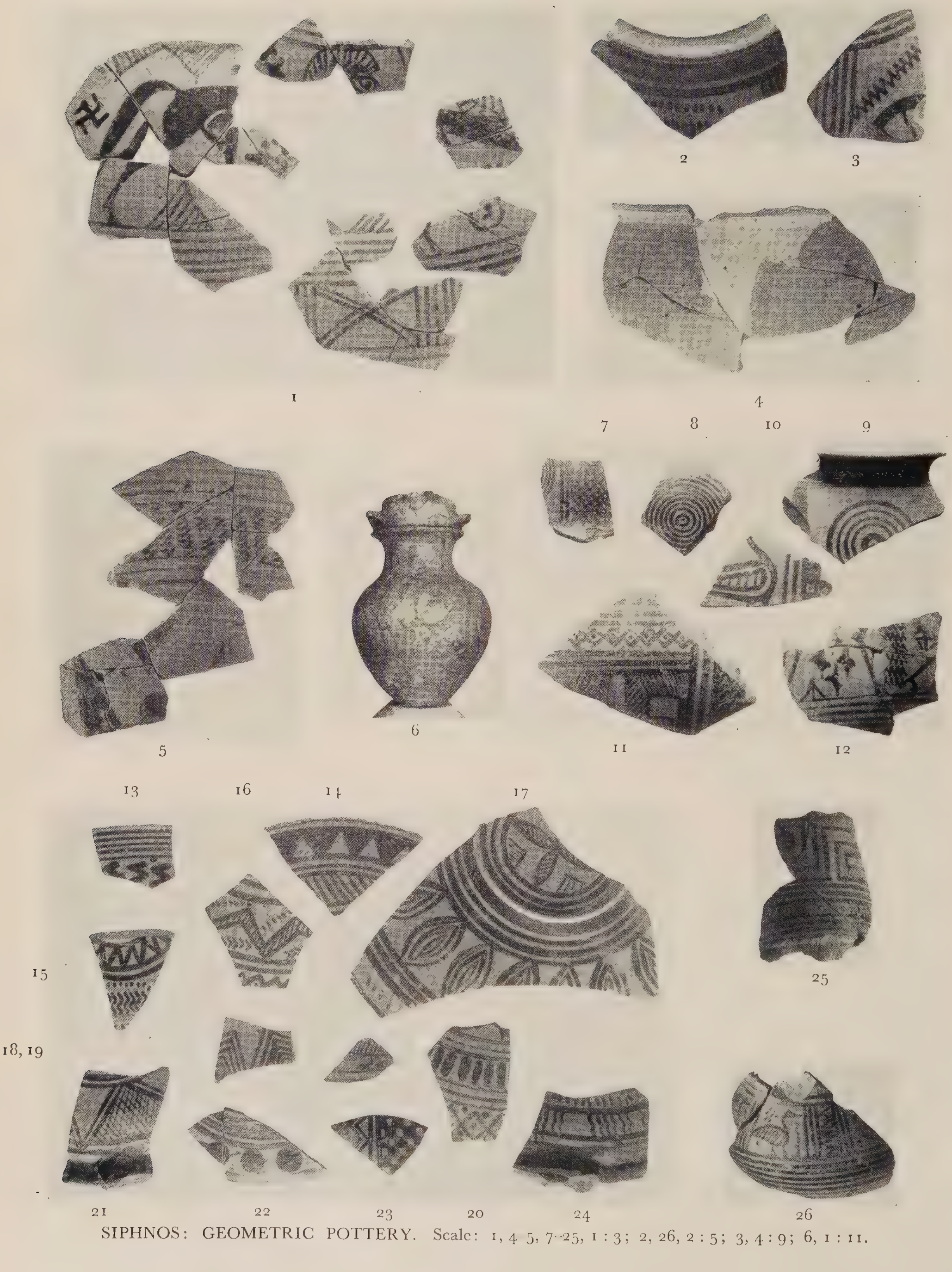


SIPHNOS: PREHISTORIC AND GEOMETRIC POTTERY.
Scale: 1–5, 3 : 4; 6–8, 1 : 2; 9, 2 : 3; 10–22, 1 : 3; 23, *c.* 1 : 5; 24–33, 3 : 10.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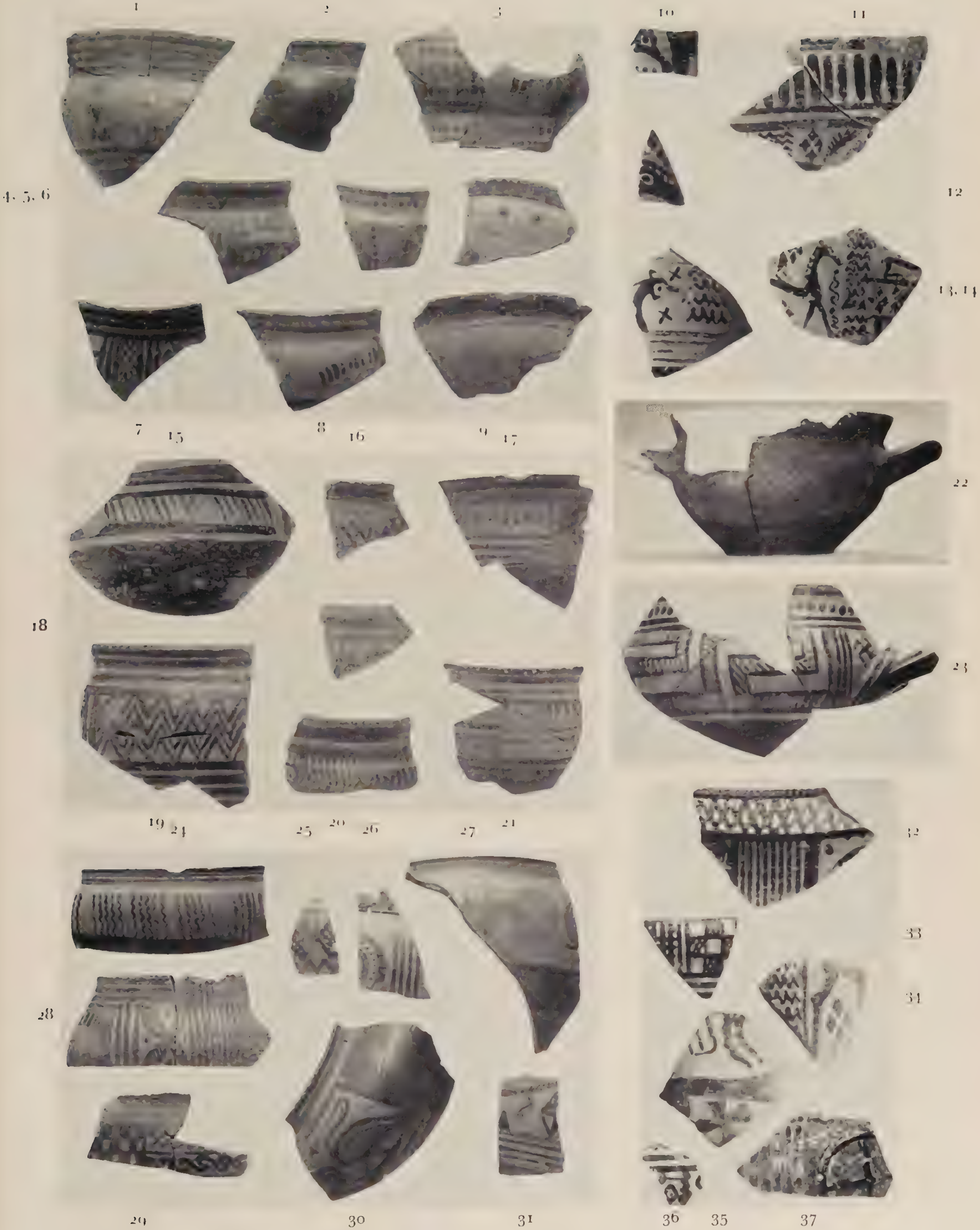
SIPHNOS: GEOMETRIC POTTERY. Scale: 1, 4–5, 7–25, 1 : 3; 2, 26, 2 : 5; 3, 4 : 9; 6, 1 : 11.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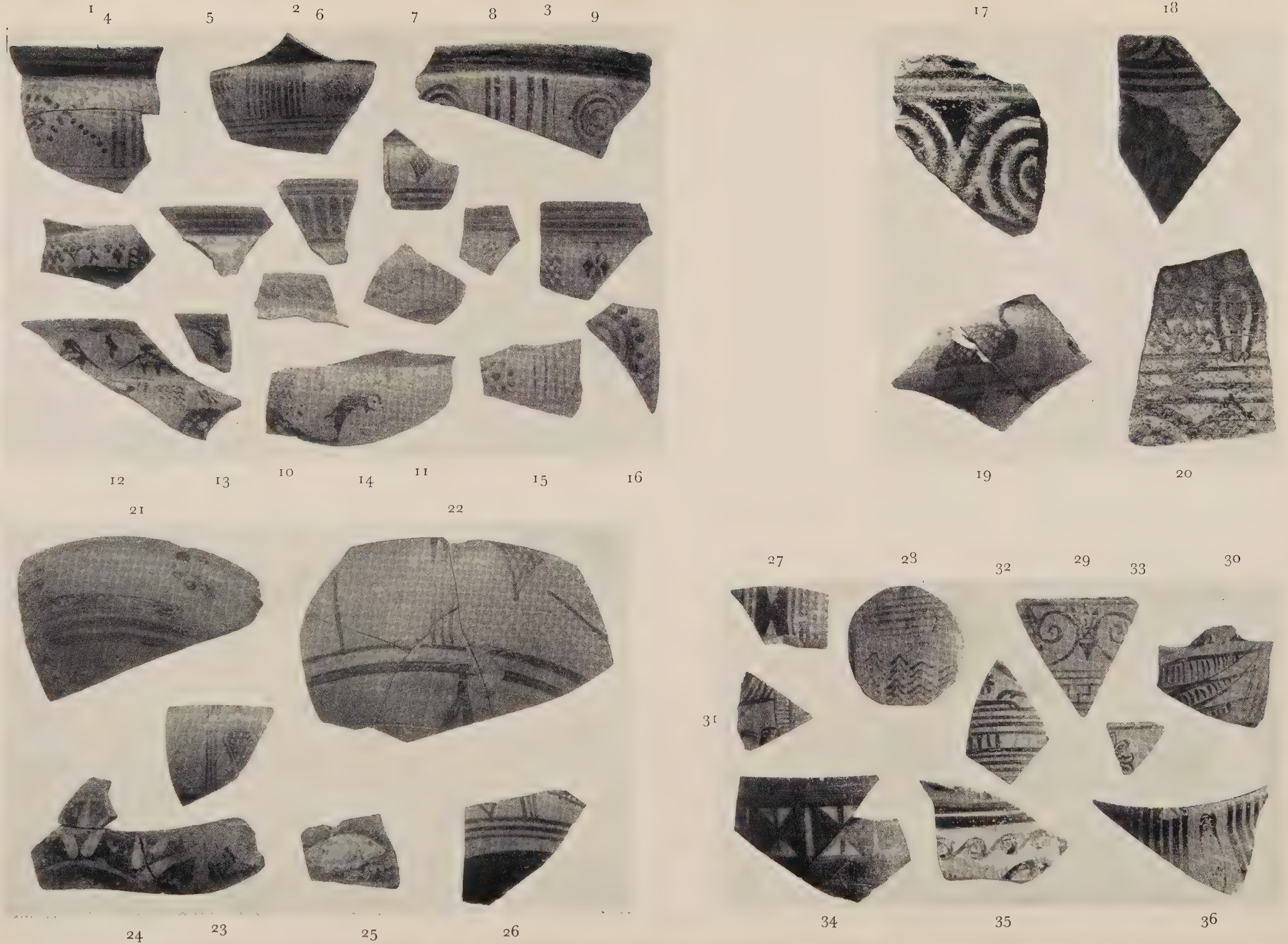
SIPHNOS: GEOMETRIC POTTERY. Scale: 1–21, 32, 2 : 5; 22–31, 1 : 3; 33–37, 1 : 2.

PLATE 15.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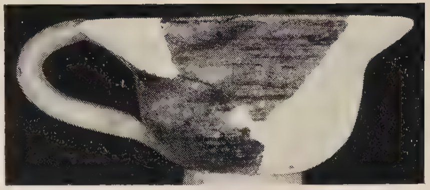
SIPHNOS: GEOMETRIC AND SEVENTH CENTURY POTTERY. Scale: 1–16, 5 : 12; 17–19, 21–26, 5 : 8; 20, 3 : 4; 27–36, 1 : 2.



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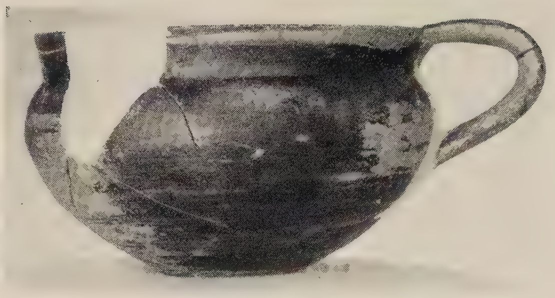

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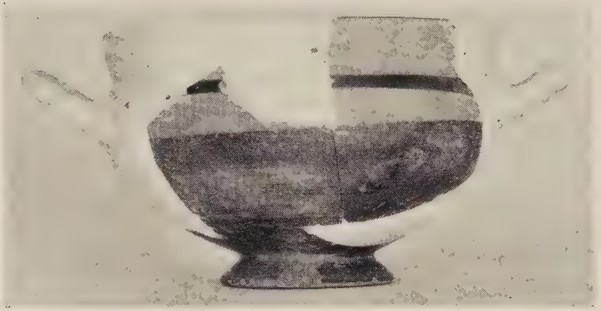

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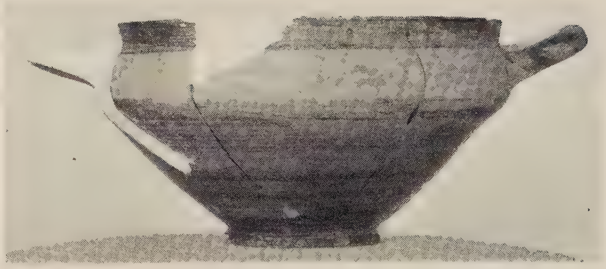

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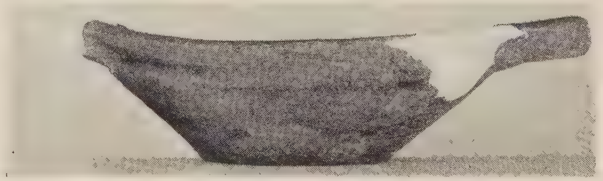

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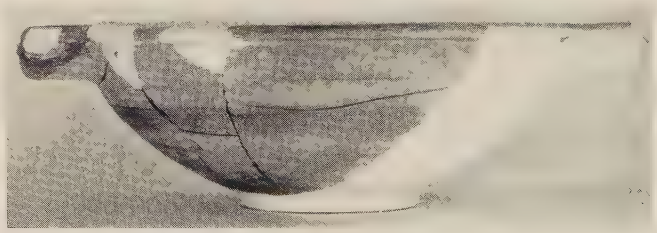

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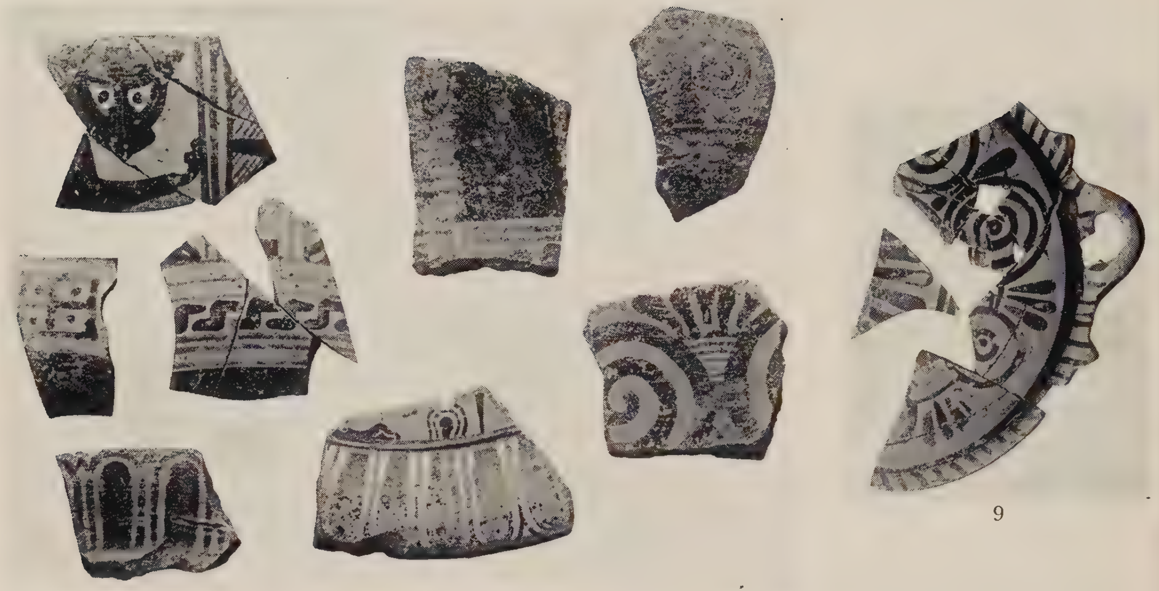
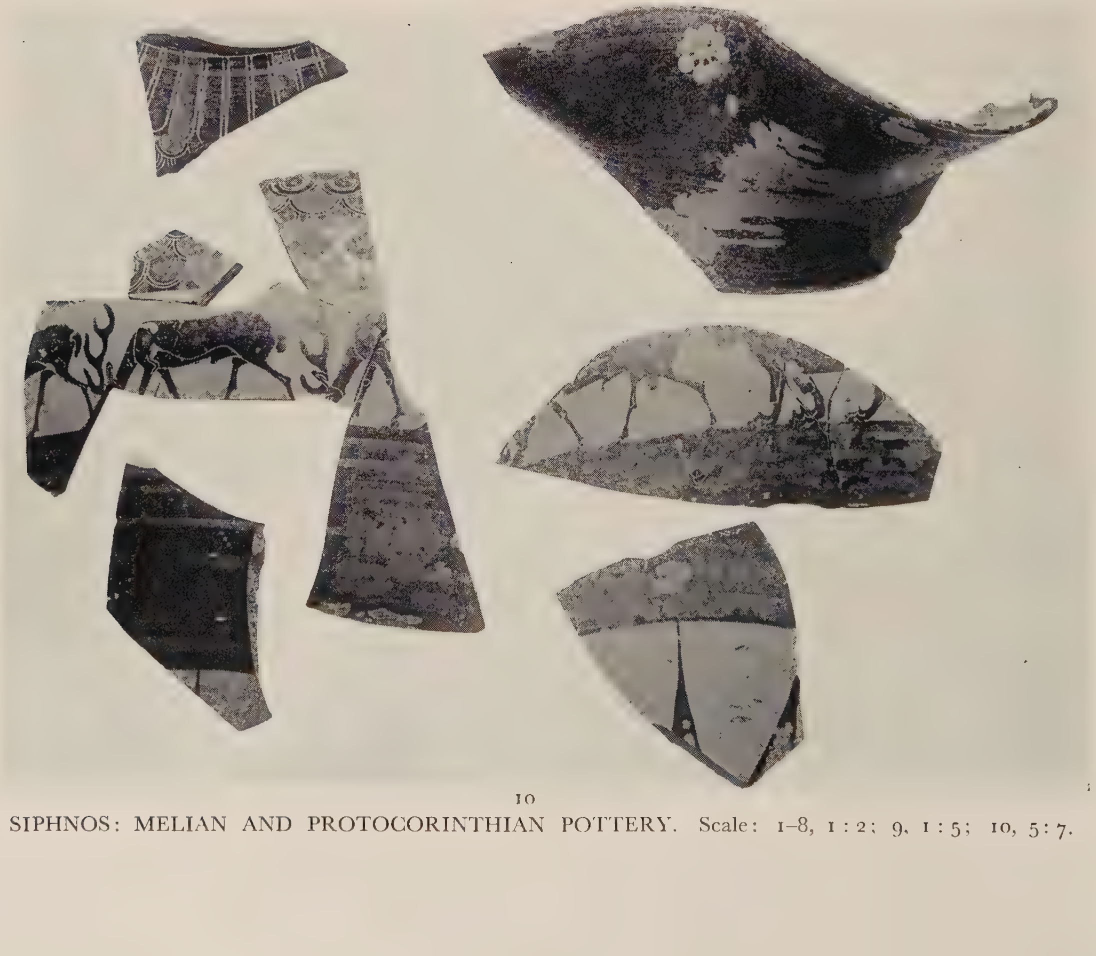
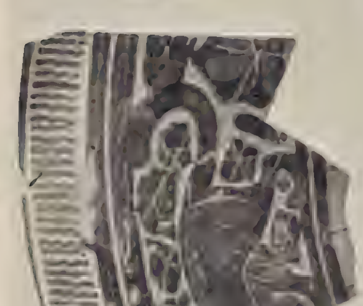
SIPHNOS: SEVENTH CENTURY POTTERY. Scale 5 : 12.





SIPHNOS: MELIAN AND PROTOCORINTHIAN POTTERY. Scale: 1–8, 1 : 2; 9, 1 : 5; 10, 5 : 7.

PLATE 18.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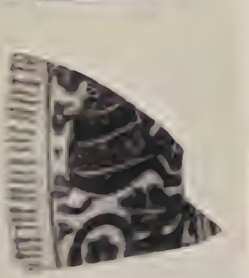
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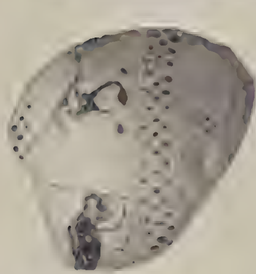
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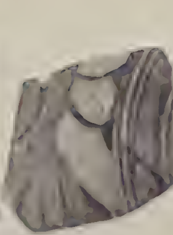
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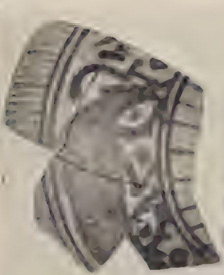
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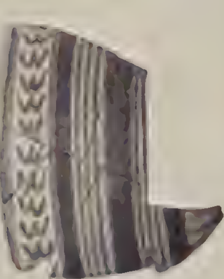
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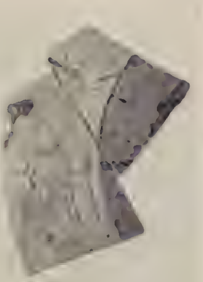
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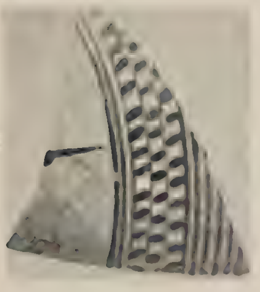
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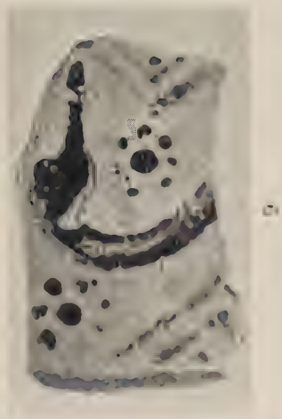
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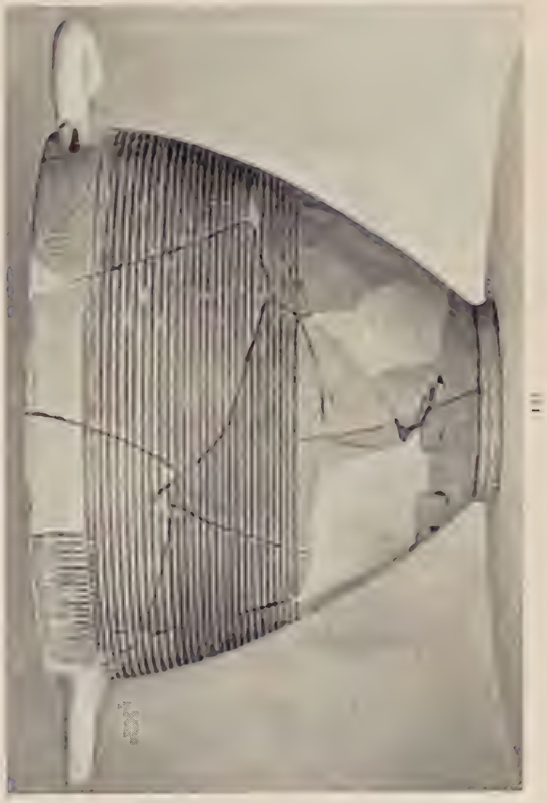
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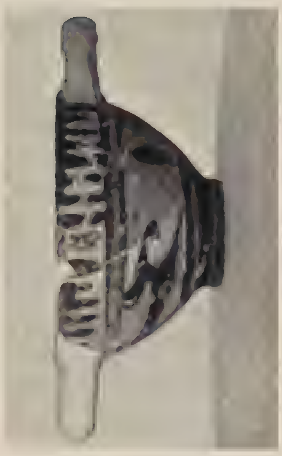
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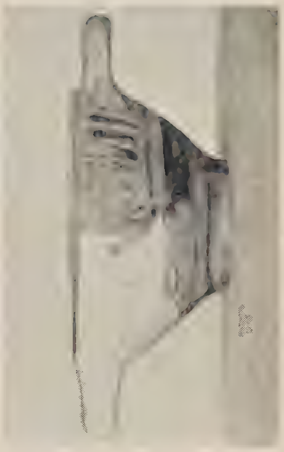
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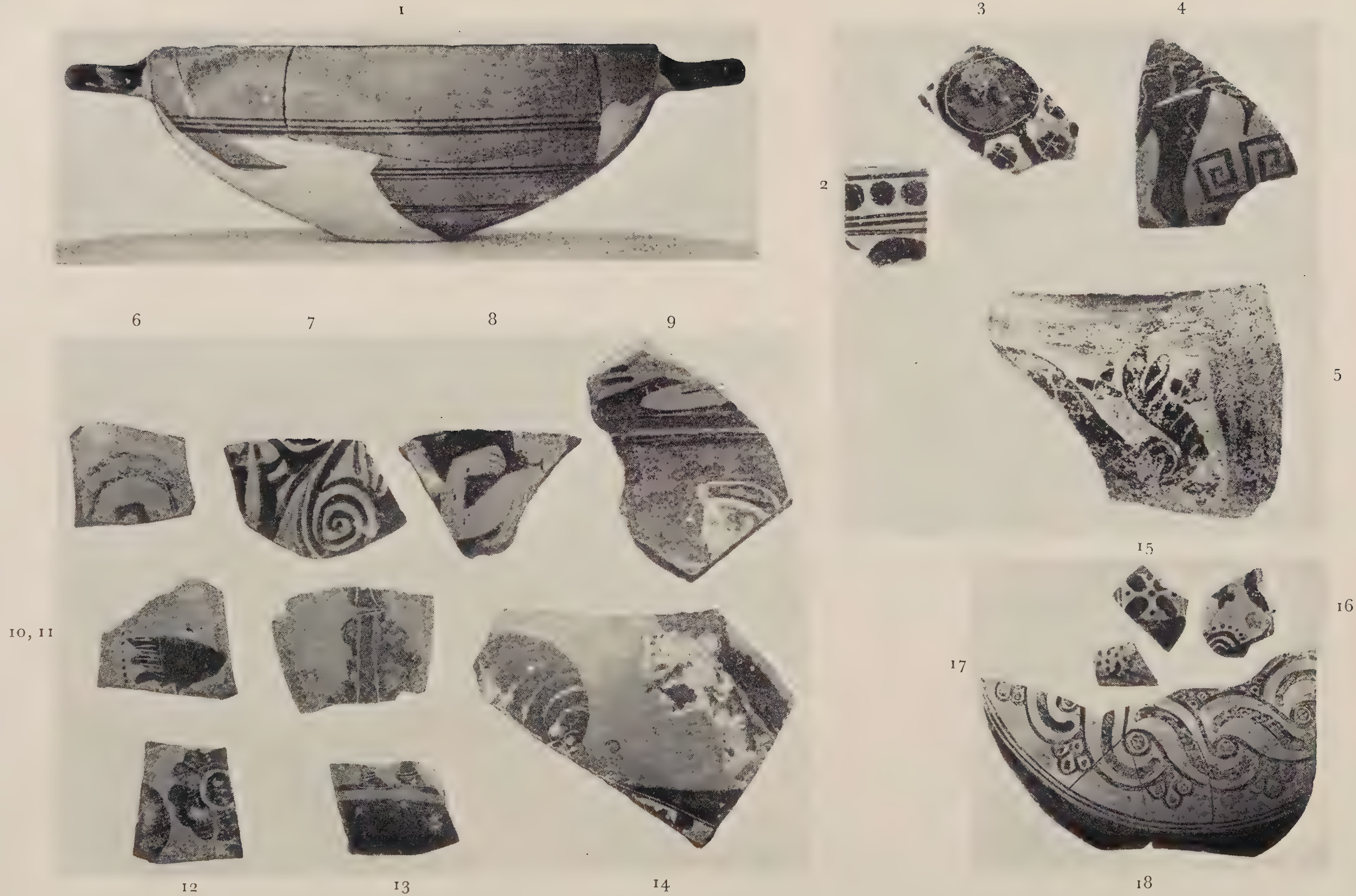
SIPHNOS: PROTOCORINTHIAN AND CORINTHIAN POTTERY (except 9). Scale: 1–7, 1 : 2; 8, 4 : 5; 9, 11–12, 3 : 4; 10, 5 : 9.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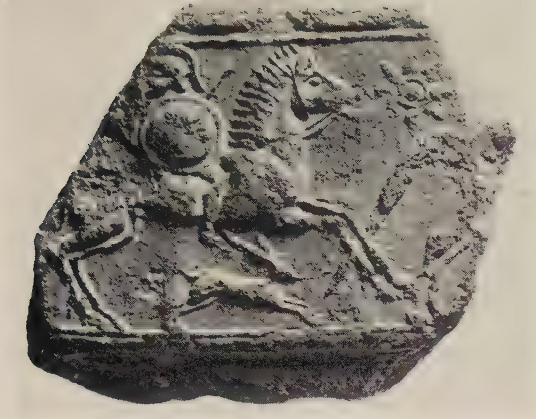
SIPHNOS: ARCHAIC AND CLASSICAL POTTERY. Scale: 1, 5 : 18; 2–18, 1 : 3.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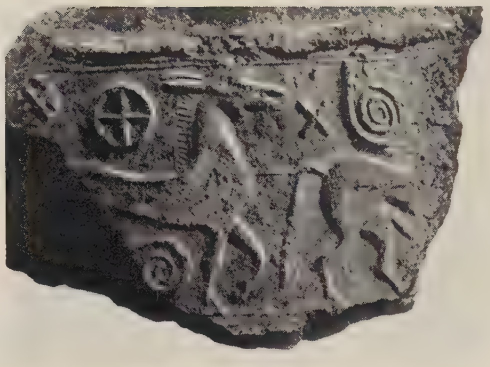
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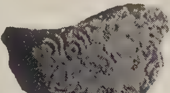

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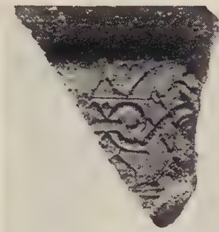

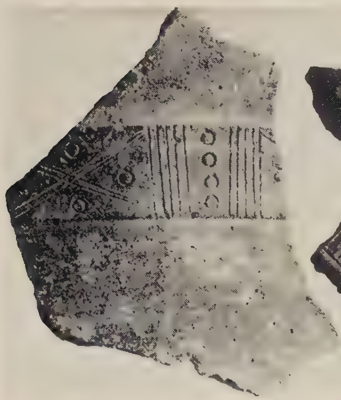
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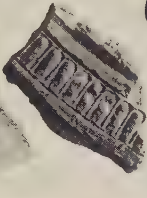
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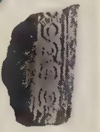
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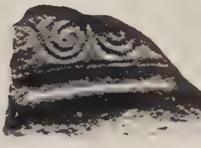
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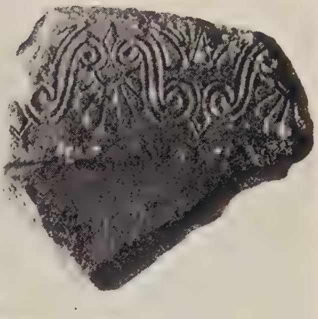
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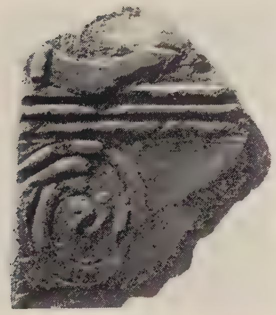
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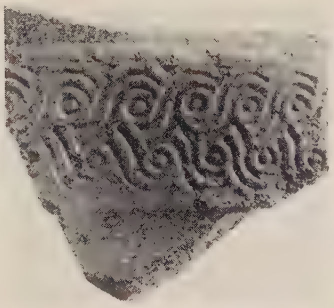
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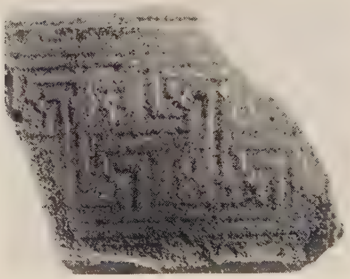
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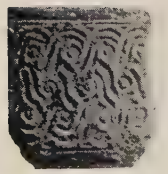
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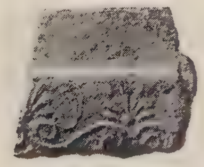
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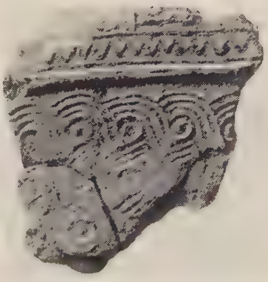
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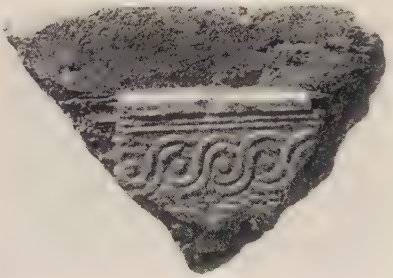
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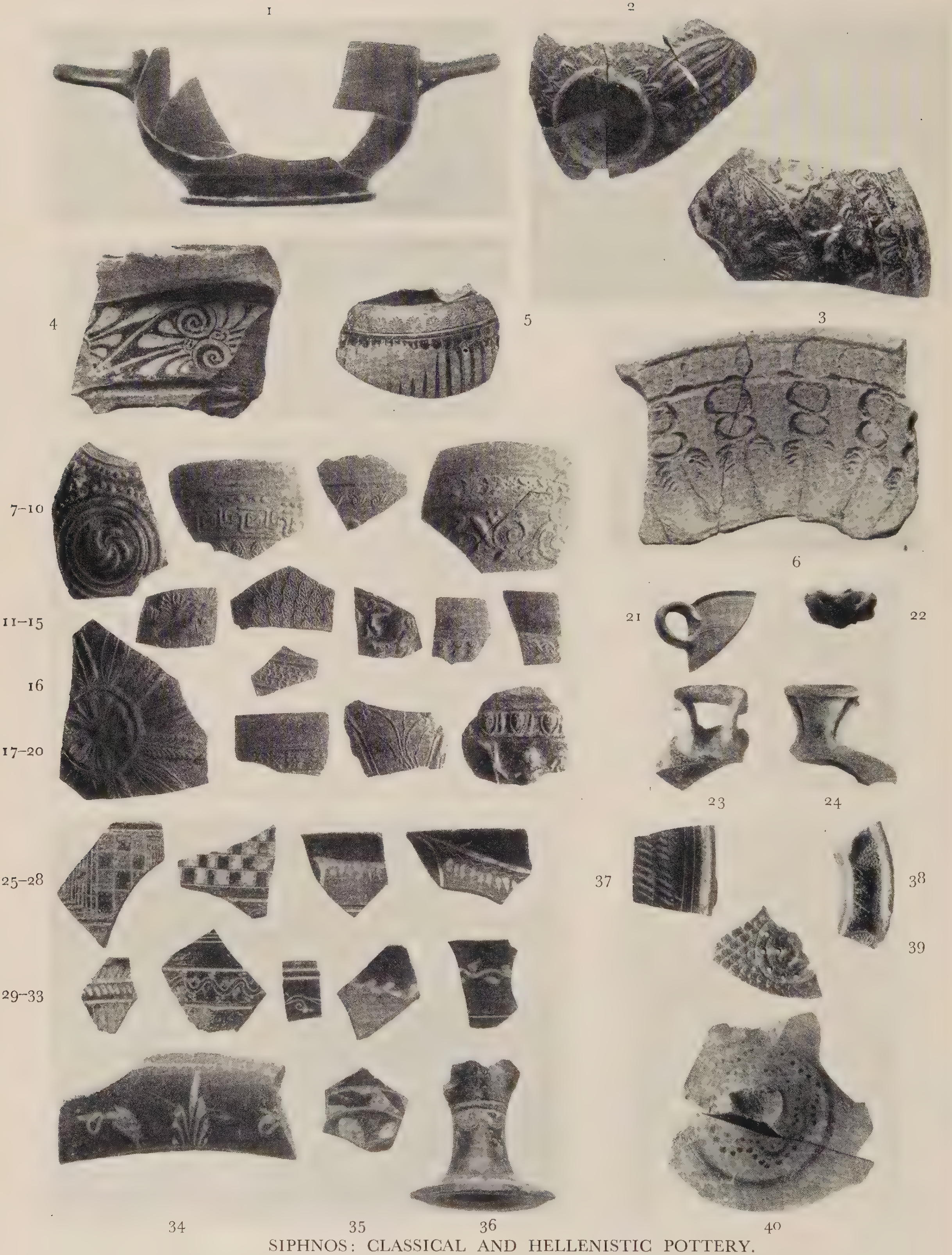
SIPHNOS: PITHOI WITH RELIEF DECORATION.
Scale: 1, 9 : 10; 2, 3 : 4; 3–6, 1 : 4; 7–16, 1 : 2.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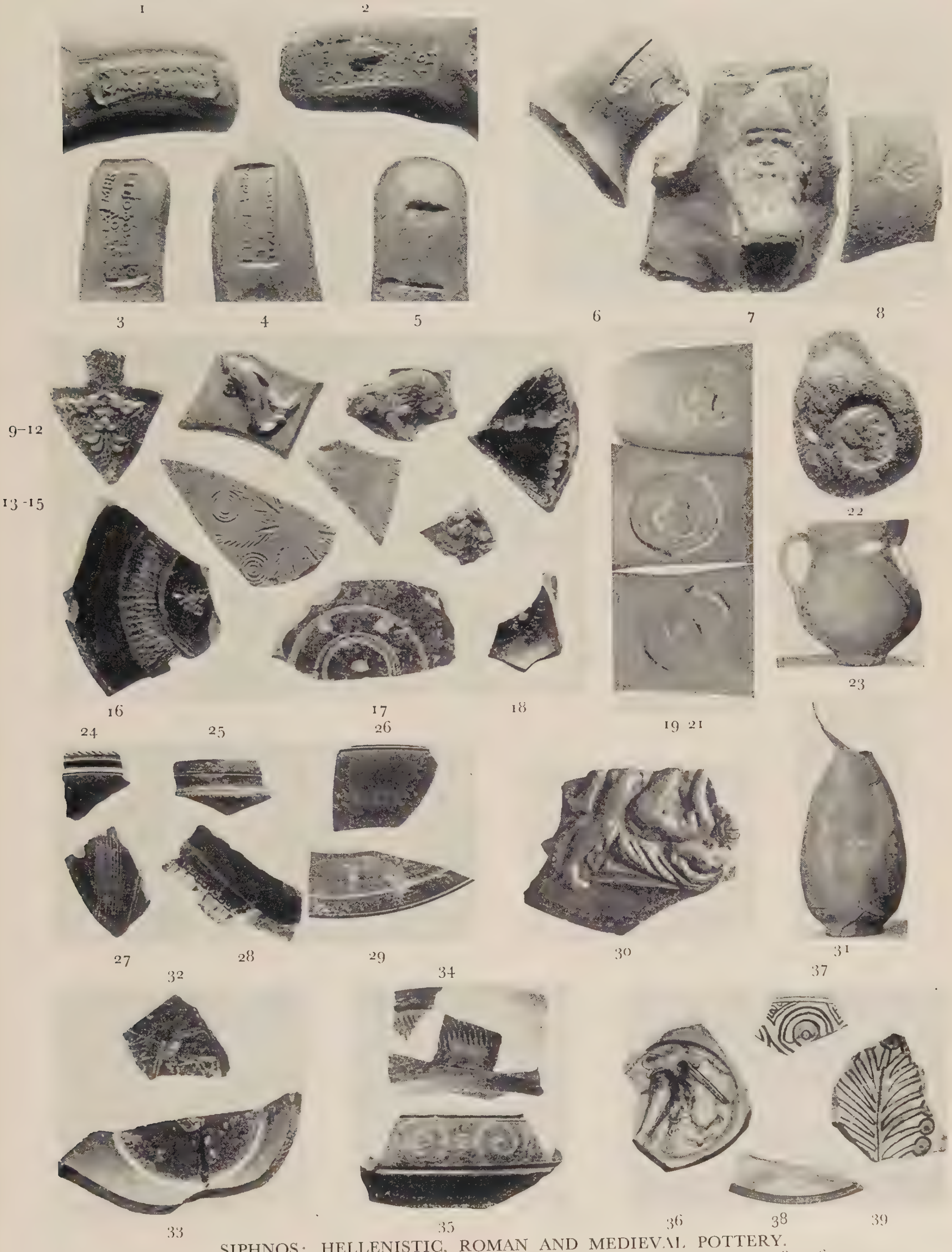
SIPHNOS: CLASSICAL AND HELLENISTIC POTTERY.

Scale: 1, 4 5, 1 : 2; 2–3, 25–36, 3 : 8; 6, 4 : 7; 7–20, 37–40, 2 : 5; 21–24, 1 : 4.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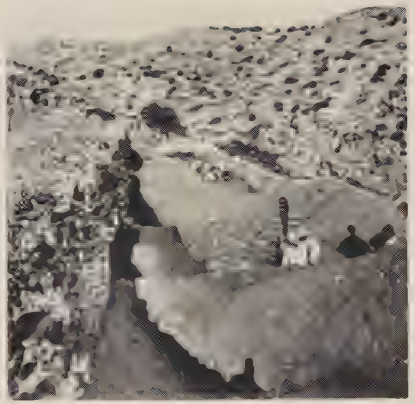
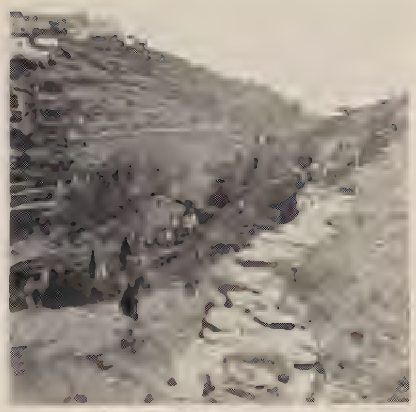
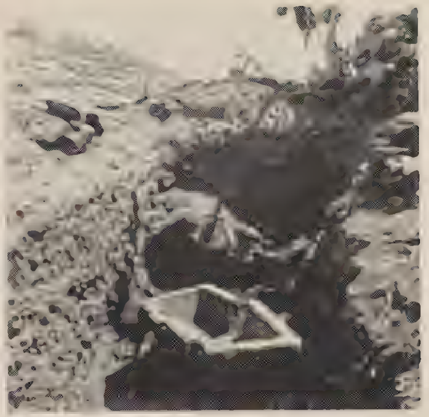
SIPHNOS: HELLENISTIC, ROMAN AND MEDIEVAL POTTERY.
Scale: 1–8, 19–22, 30, 1 : 2; 9–18, 3 : 8; 23, 31, 34–35, 1 : 4; 24–29, 1 : 3; 32–33, 5 : 8; 36–39, 2 : 7.



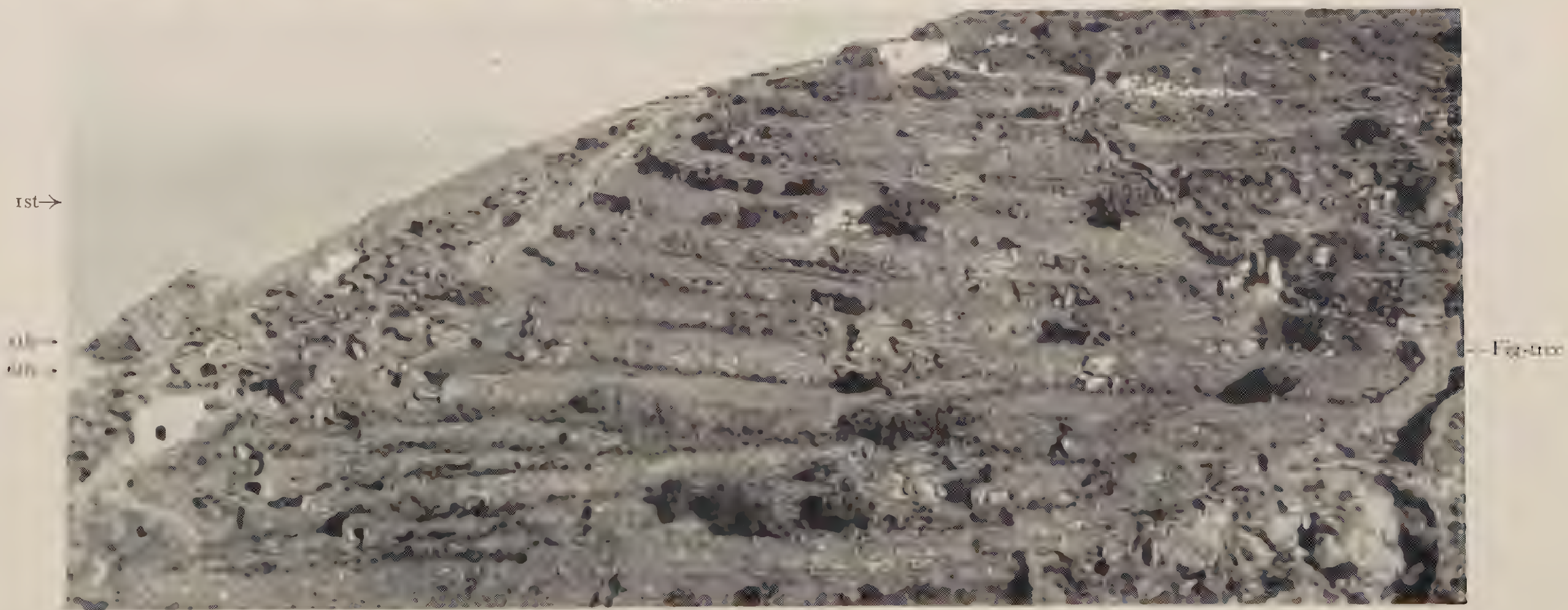
1. 6th Terrace, looking W.



2. 6th Terrace, looking E.



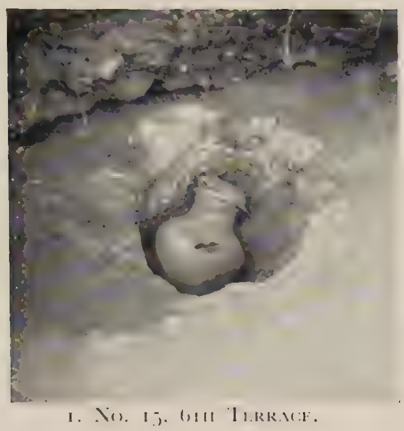
3. Fig-tree Terrace, looking E.: No. 19.

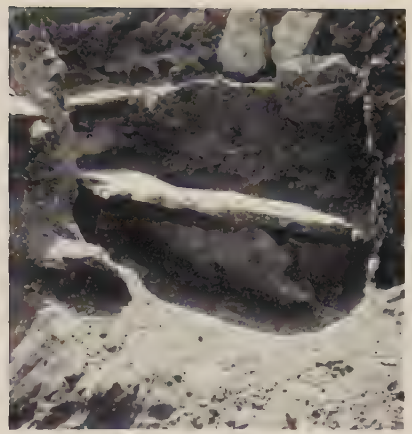


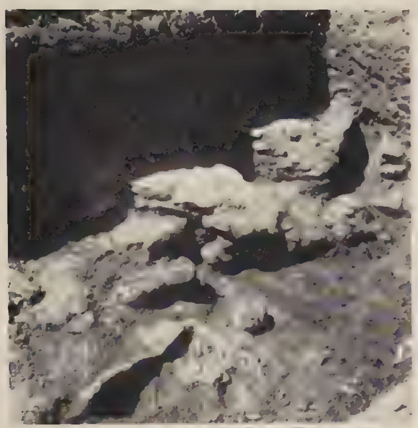
1st→
5th→
6th→
Fig-tree
(in 5th terrace)
(in 6th terrace)
3, 2, 1
8, 7, 6, 5, 4,
9, 10, 11, 12
15
13 14
17 16
18
(in fig-tree terrace)
19, 24, 23
21, 20, 22

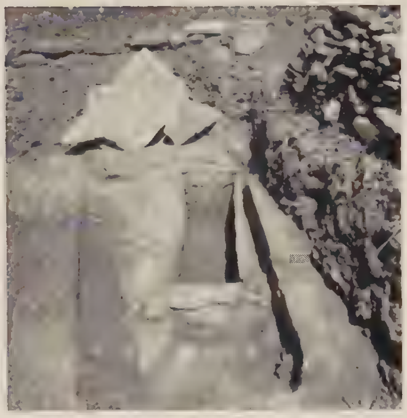
4. Site of Ancient Cemetery.

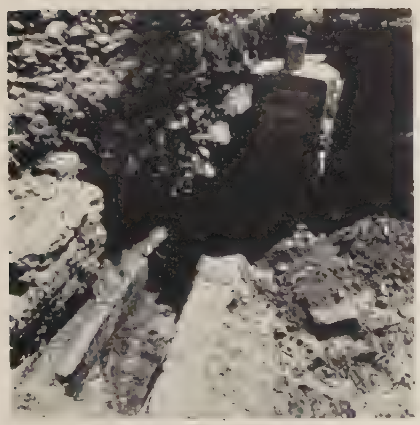
SIPHNOS: GRAVE TERRACES.

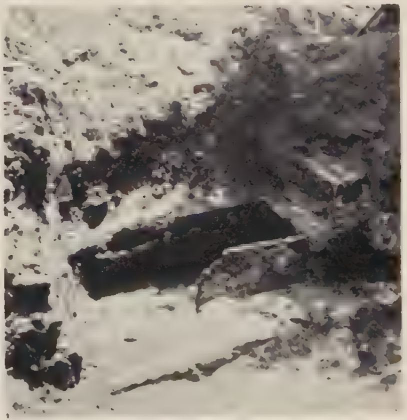

1. No. 15, 6th Terrace.


2. No. 1, 5th Terrace.

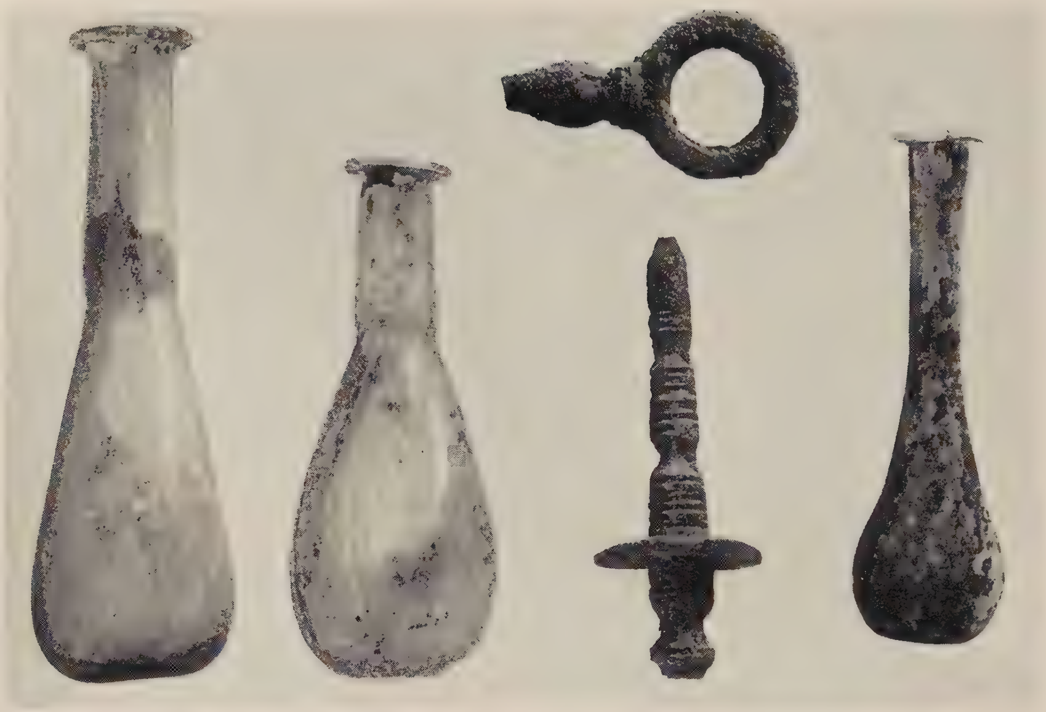

3. No. 11 *a*, *b*, *c*, *d*, 6th Terrace.


4. No. 4, 6th Terrace.

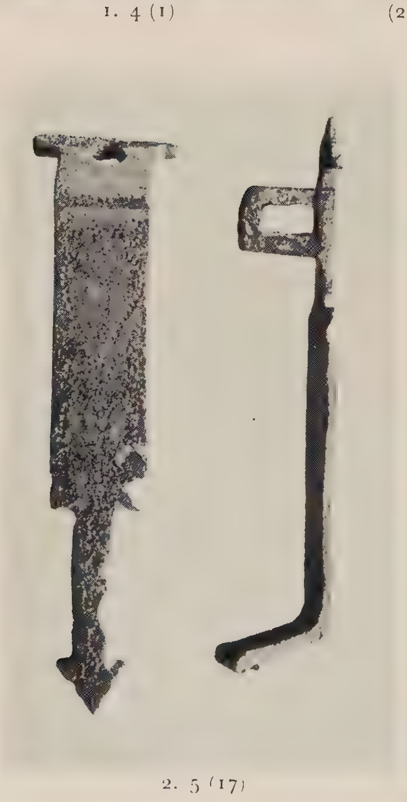

5. No. 14, 6th Terrace.


6. No. 17, 6th Terrace.

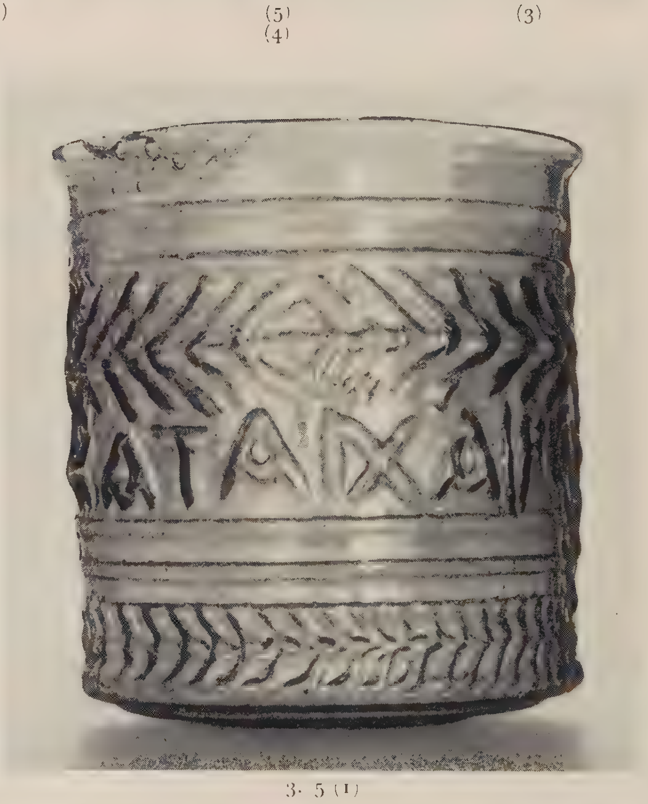
SIPHNOS, GRAVES.



1. 4 (1) (2) (5) (4) (3)

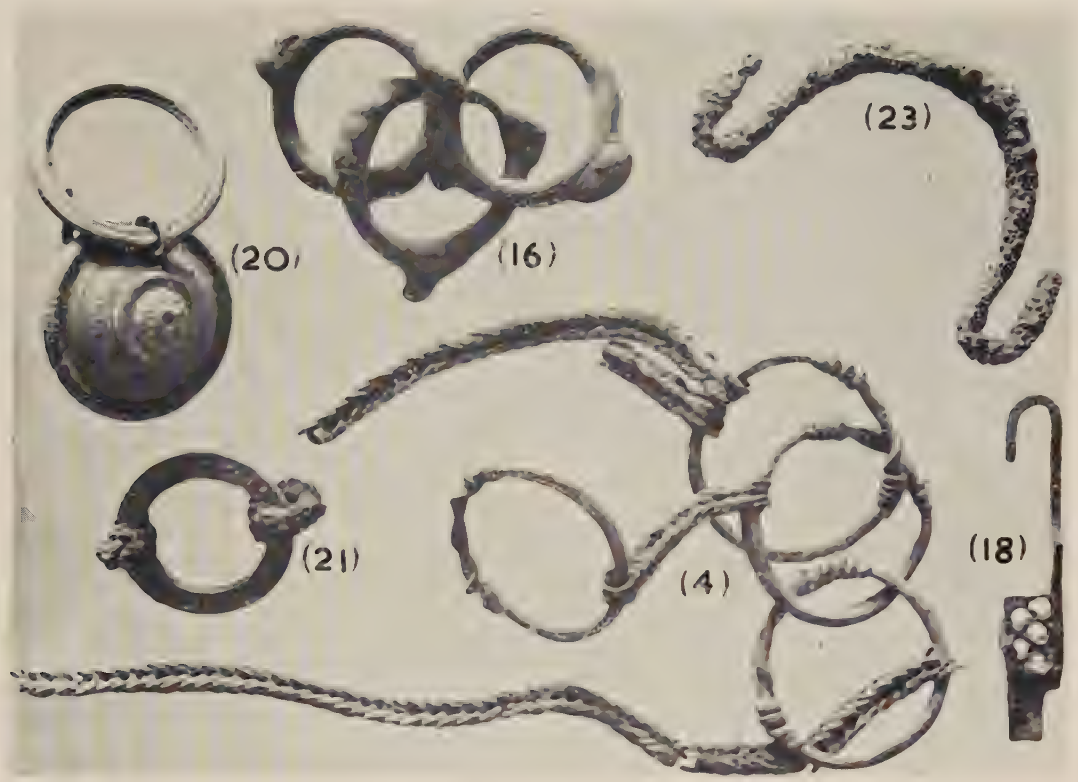


2. 5 (17)

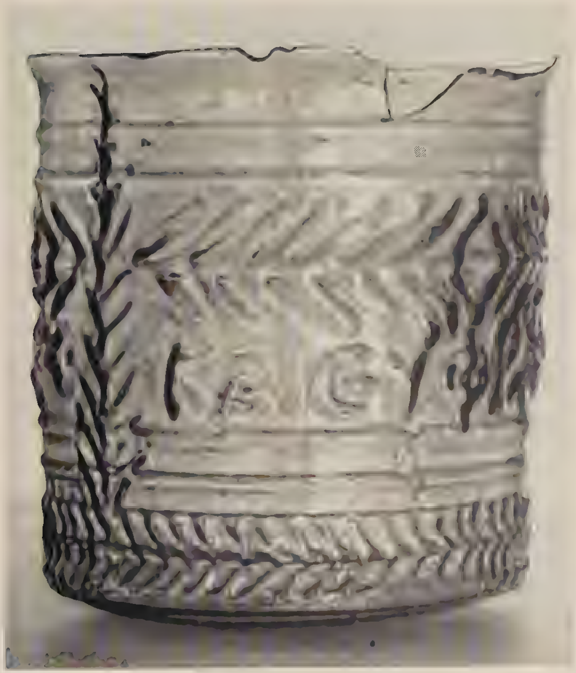


3. 5 (1)

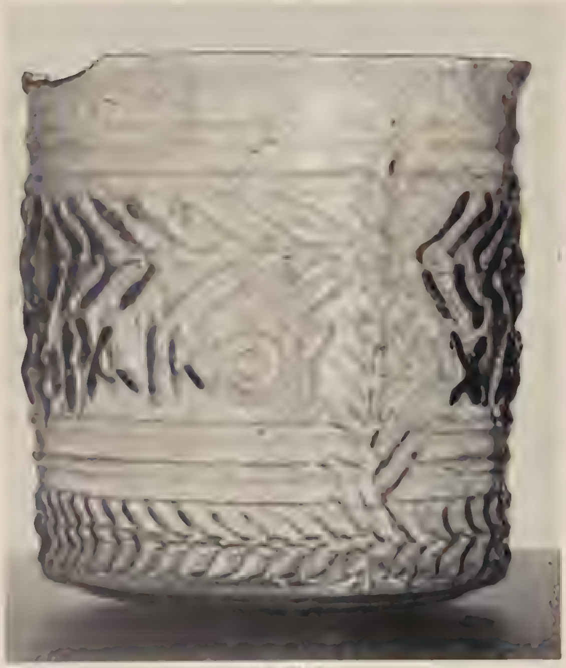
SIPHNOS: OBJECTS FROM ROMAN GRAVES. Scale: 1, 5:6; 2 3, 1:1.


(20)
(16)
(23)
(21)
(4)
(18)

1. FROM NO. 5

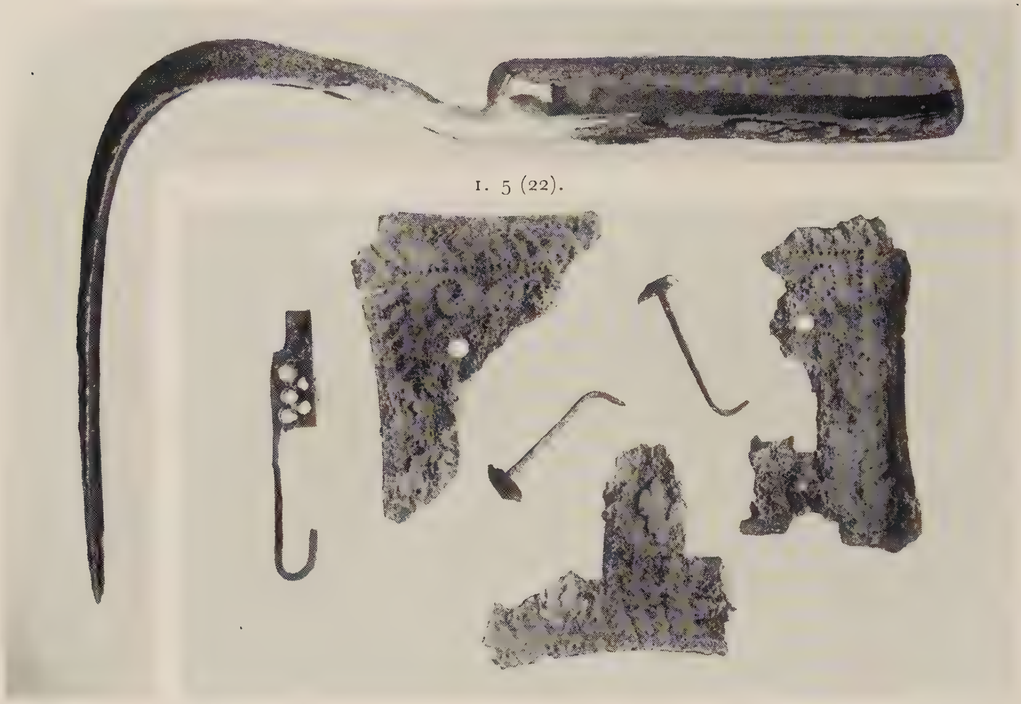


2. 5 (1).



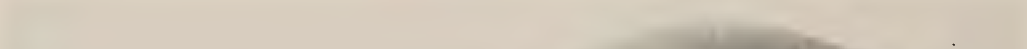
3. 5 (2).

SIPHNOS: OBJECTS FROM ROMAN GRAVES. Scale: *c.* 1 : 1.



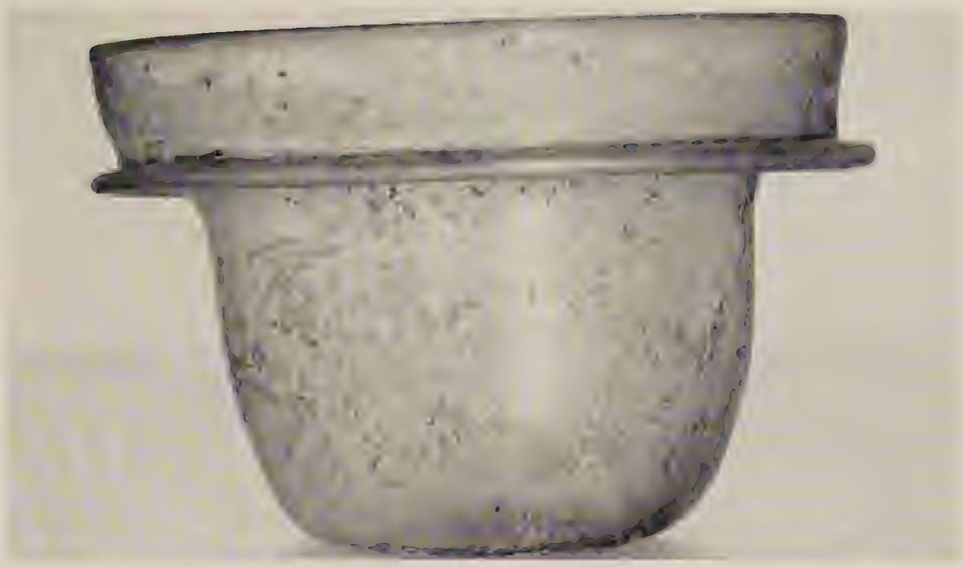
1. 5 (22).

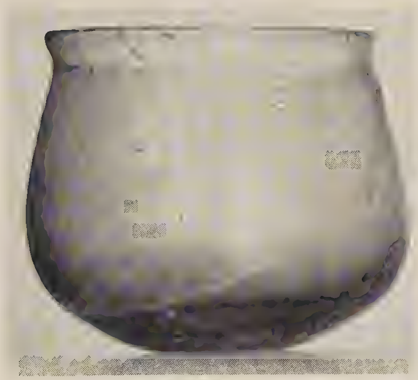
2. 5 (18).

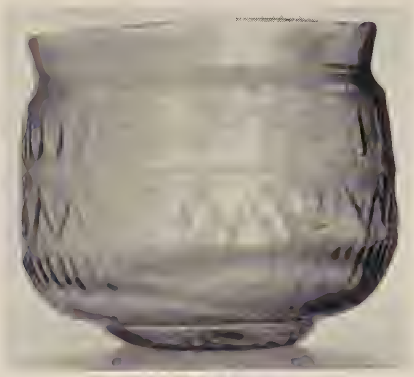


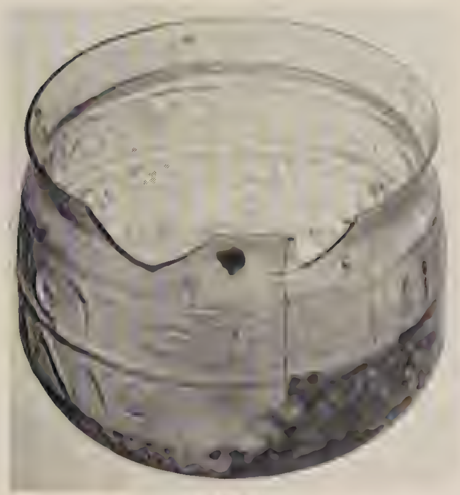
3. 5 (25).

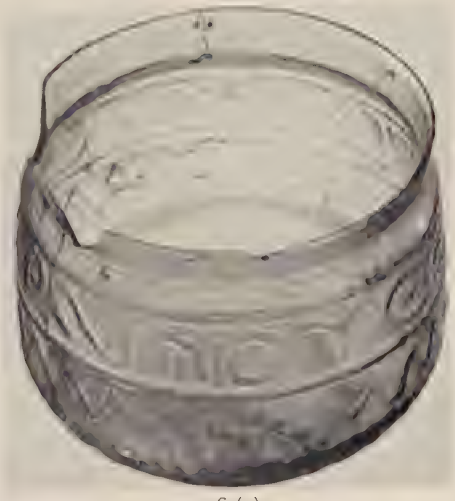
SIPHNOS: BRONZES FROM ROMAN GRAVES.
Scale: 1 and 3, 1 : 2; 2, 3 : 4.


1. 5 (2).


2. 6 (3).

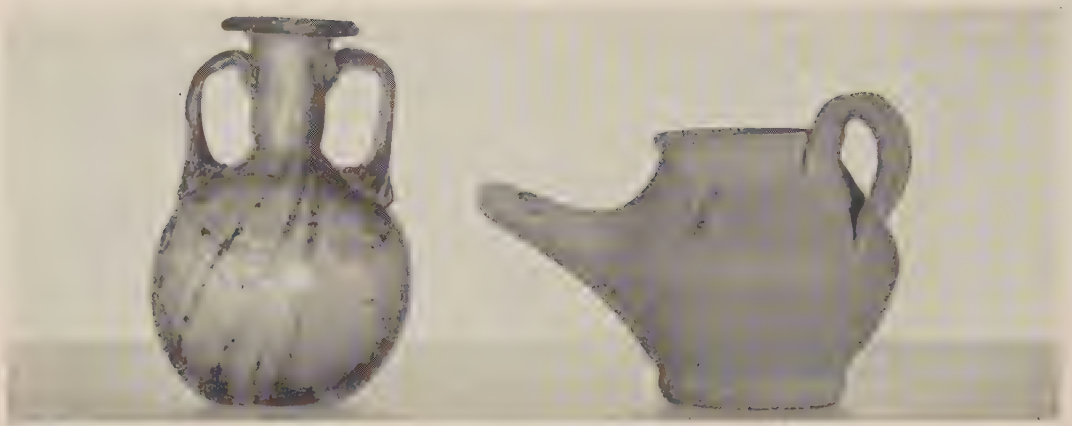

3. 6 (4).

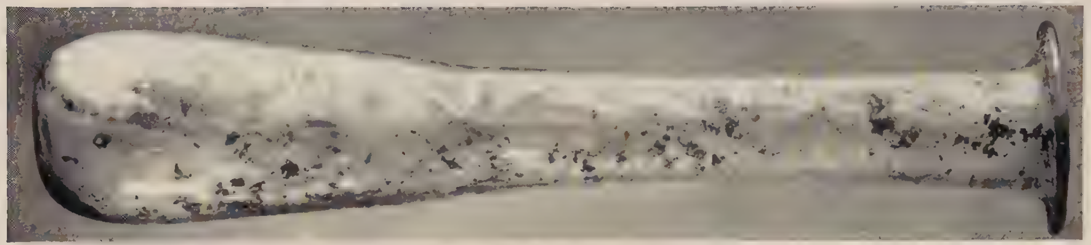

4. 6 (2).

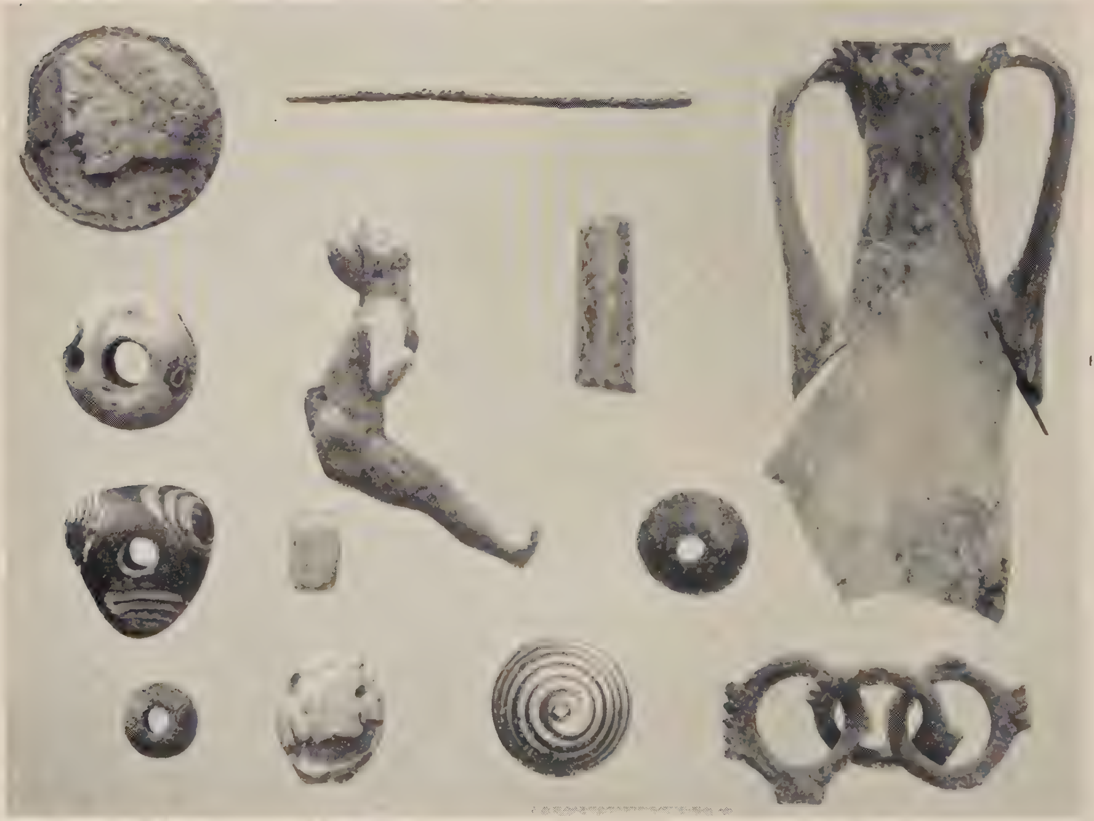

5. 6 (2).

SIPHNOS: GLASS FROM ROMAN GRAVES.

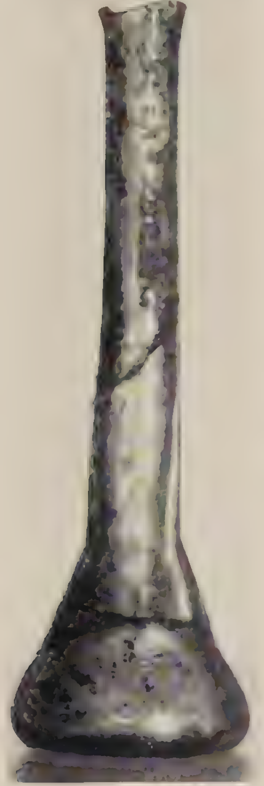
Scale: 1, 13 : 12; 2–3, 4 : 5; 4–5, 1 : 1.


1.

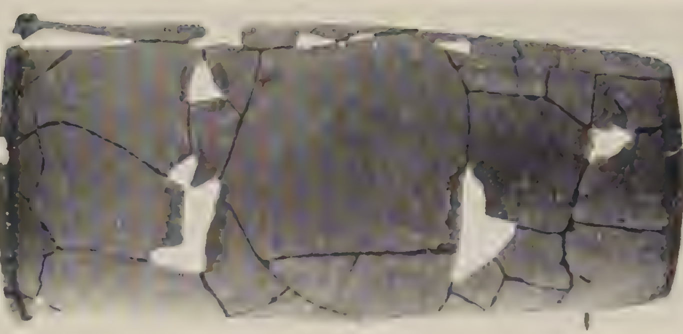

2.


3.
6 (10)
6 (13)
6 (15)
6 (5)
6 (20)
6 (19)
14
6 (7)
6 (16)
6 (17)
6 (18)
6 (23)

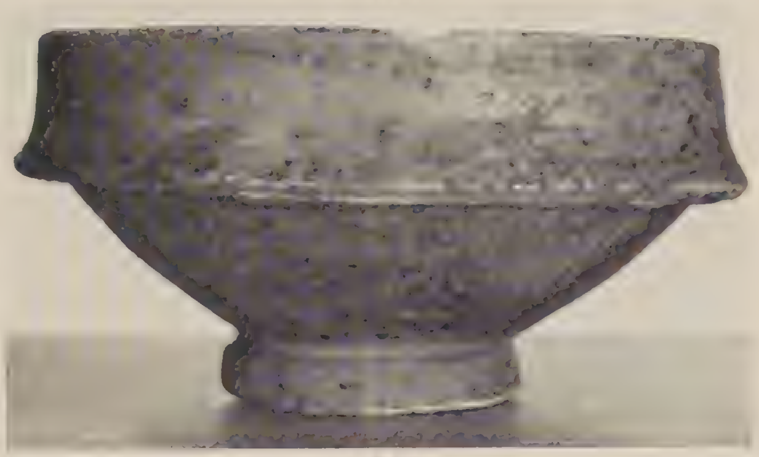
SIPHNOS: OBJECTS FROM ROMAN GRAVES.
Scale: 1, 3 : 5; 2, 1 : 1; 3, 9 : 10, except 6 (17), 1 : 1.



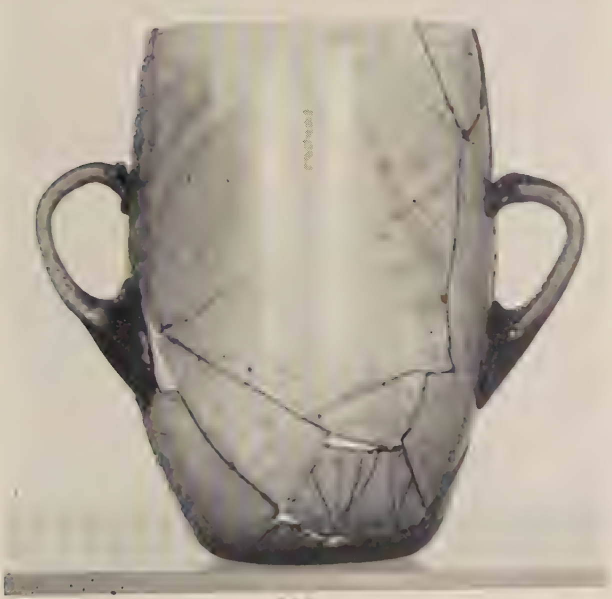
1. 7 (1)



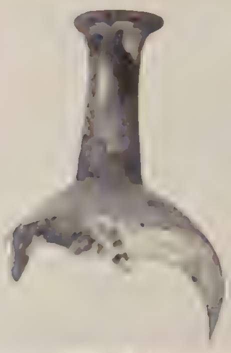
3. 6 (25)



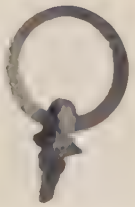
2. 8 (1)



4. 13 (2)

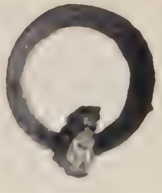


5. 13 (3)



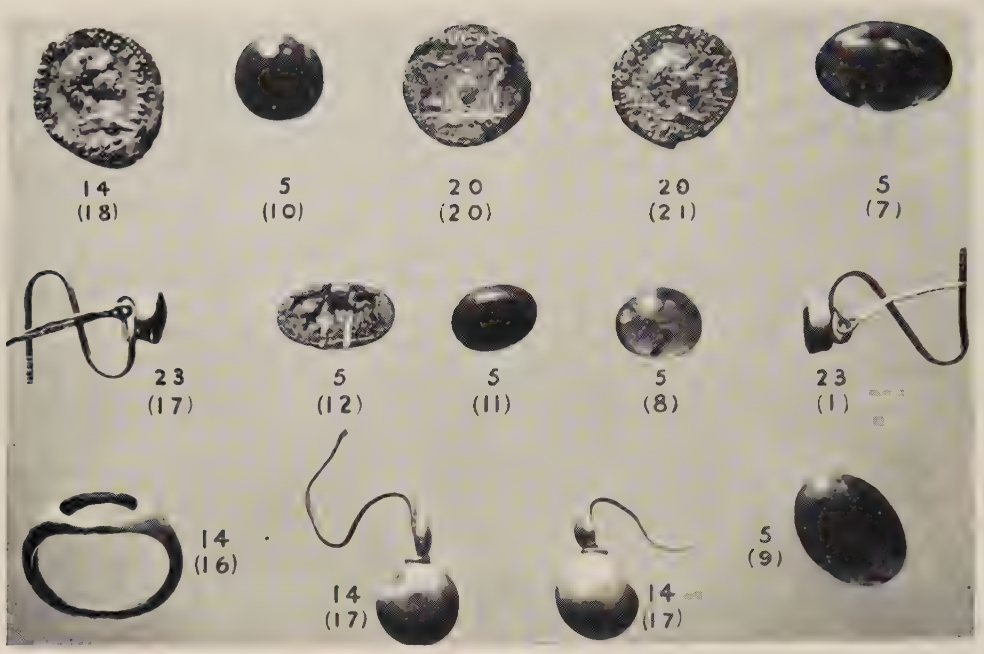
6

14 (1)

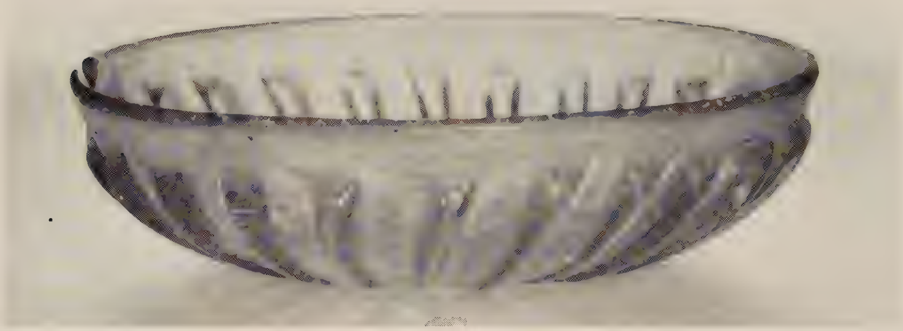


7

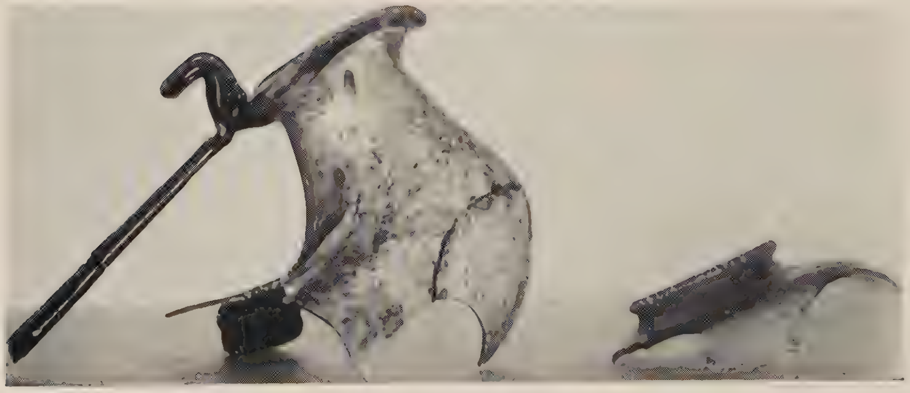
SIPHNOS: OBJECTS FROM ROMAN GRAVES
Scale 1, 2, 10 : 11; 3, 3 : 20; 4, 7 : 8; 5, 5 : 6; 6, 7, 4 : 5


14 (18)
5 (10)
20 (20)
20 (21)
5 (7)
23 (17)
5 (12)
5 (11)
5 (8)
23 (1)
14 (16)
14 (17)
14 (17)
5 (9)

1



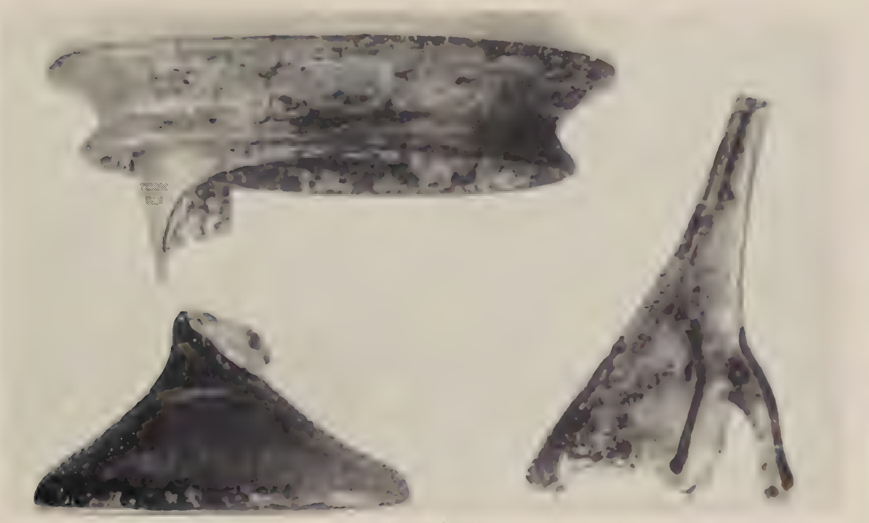
2. 14 (1)



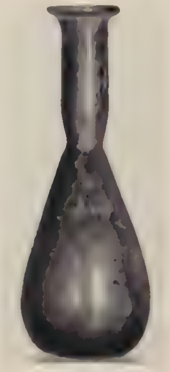
3. 14 (14)

SIPHNOS: OBJECTS FROM ROMAN GRAVES.
Scale: 1, 1 : 1; 2, 2 : 3; 3, 3 : 5.

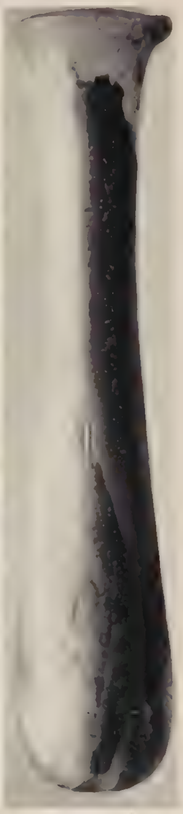
1. 14 (15)

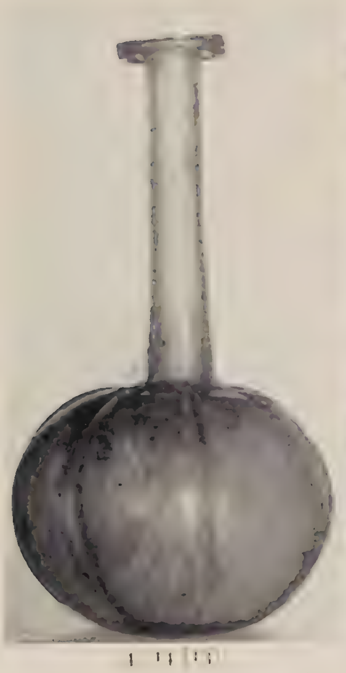


2. 14 (12)

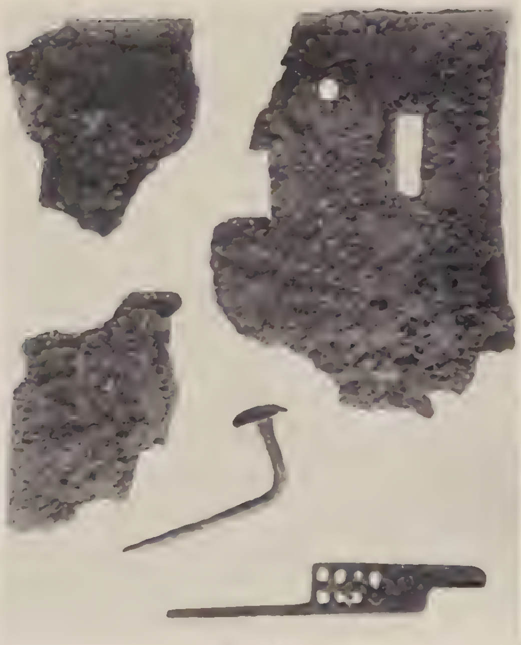


3. 14 (2)





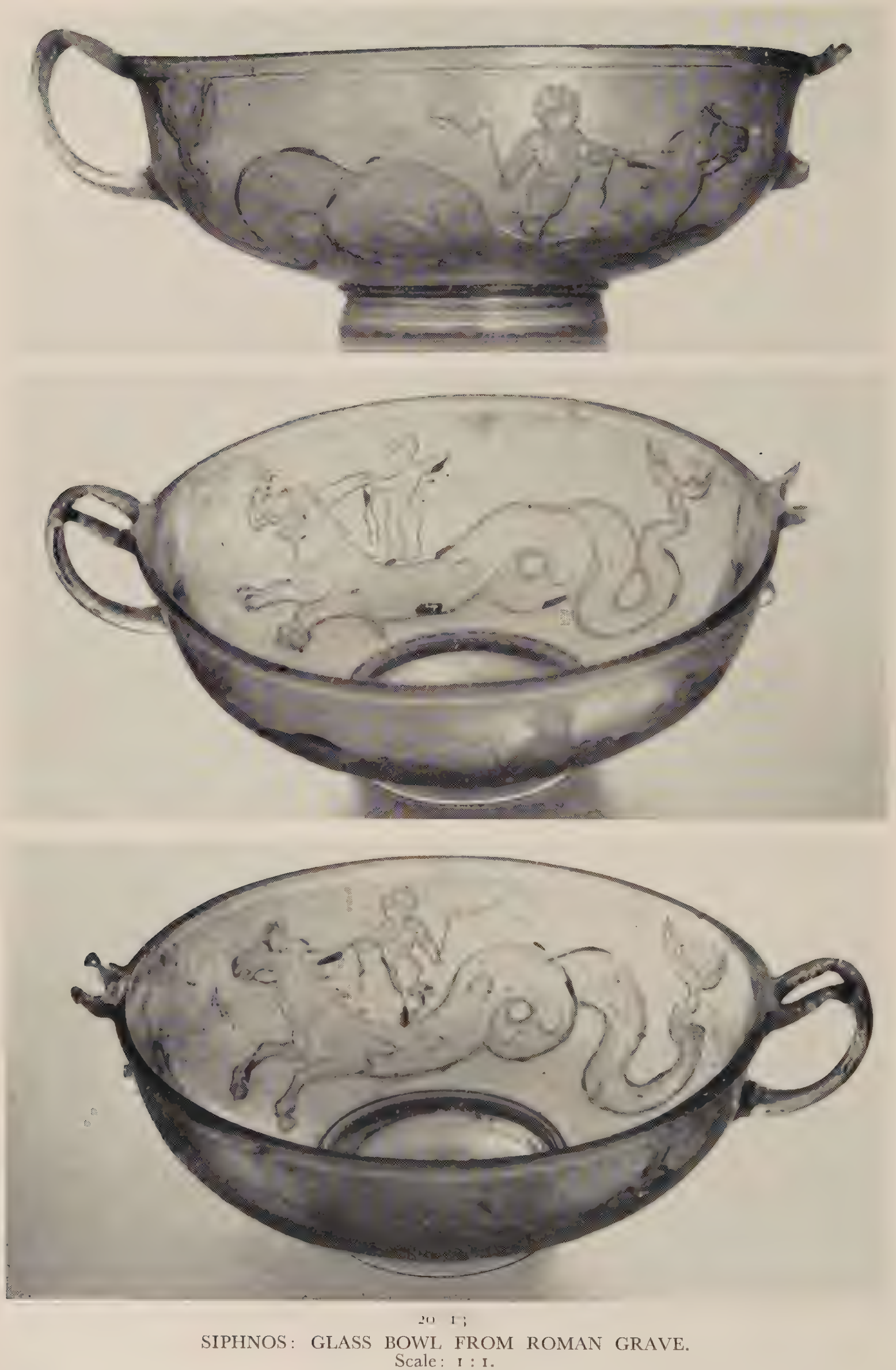
4. 14 (13)



5. 14 (10)

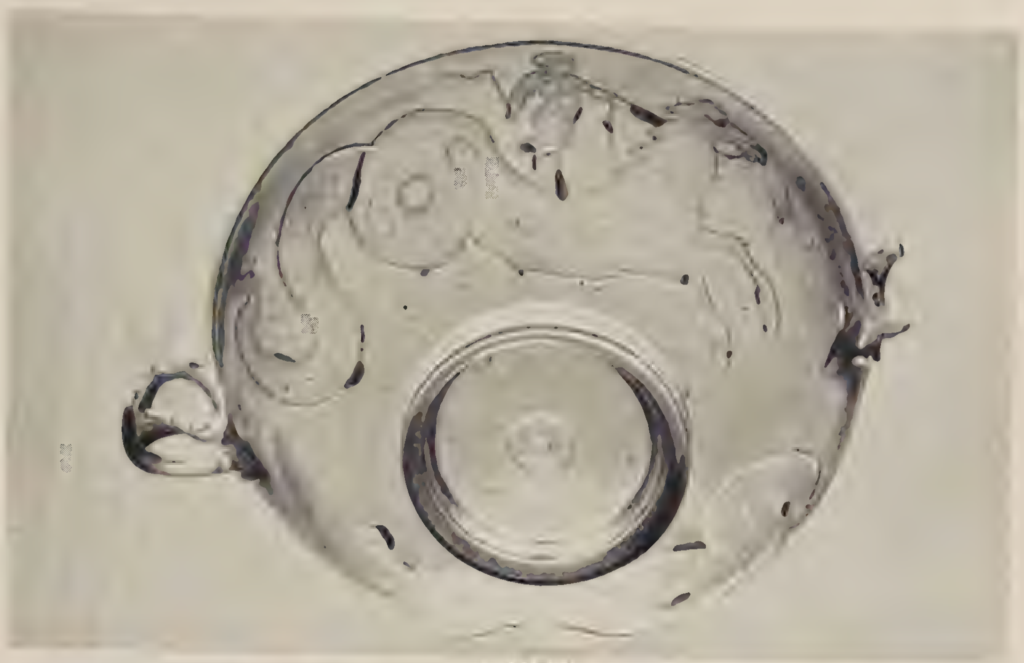
6. 14 ([illegible])

SIPHNOS: OBJECTS FROM ROMAN GRAVES
Scale: 1, 2 : 3; 2, 6, 1 : 1; 3–4, 1 : 2; 5, 3 : 4.

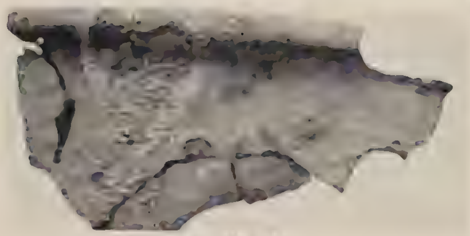


20 13

SIPHNOS: GLASS BOWL FROM ROMAN GRAVE.
Scale: 1 : 1.

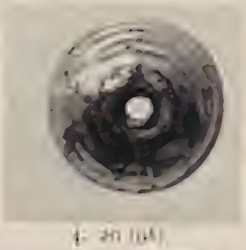


1. 20 (11)

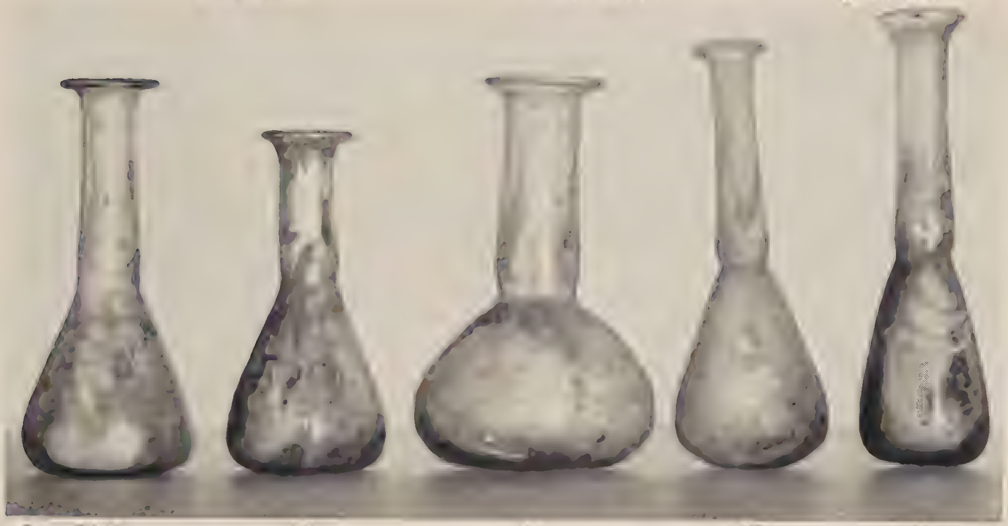


2. 20 (4)

3. 20 (9)



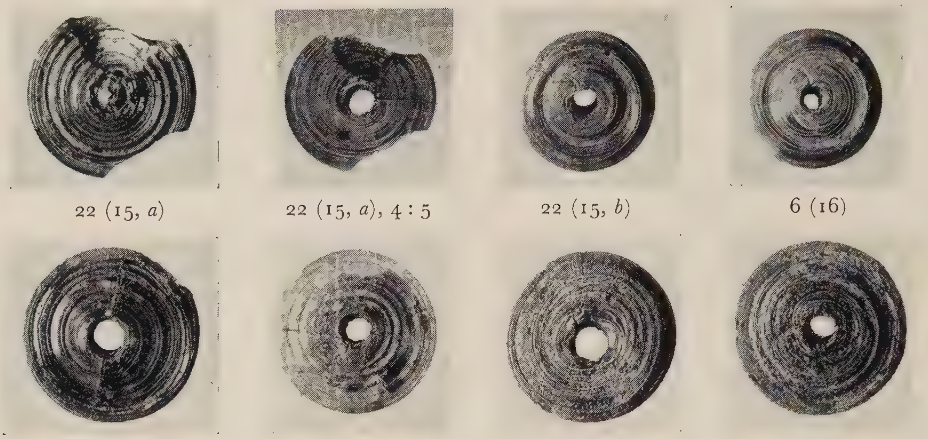
4. 20 (10)



5. 20 (1) [illegible] (5) (10) (12)

SIPHNOS: OBJECTS FROM ROMAN GRAVES.

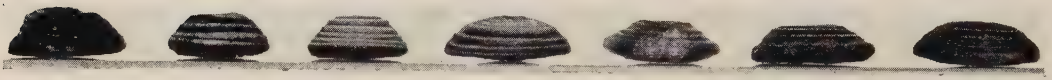
Scale: 1, 13:16; [illegible] 3-4, [illegible]



22 (15, *a*) 22 (15, *a*), 4 : 5 22 (15, *b*) 6 (16)

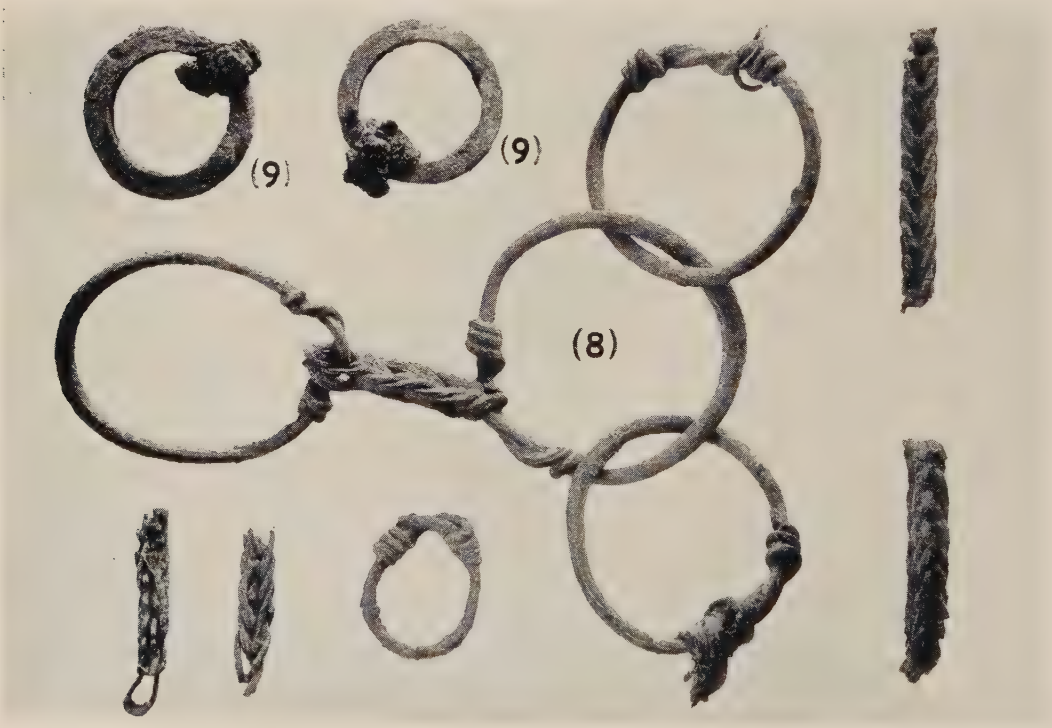
20 (9, *a*) 20 (9, *b*) 7 (2, *a*) 7 (2, *b*)

1



22 (15, *a*) 22 (15, *b*) 6 (16) 20 (9, *a*) 20 (9, *b*) 7 (2, *a*) 7 (2, *b*)

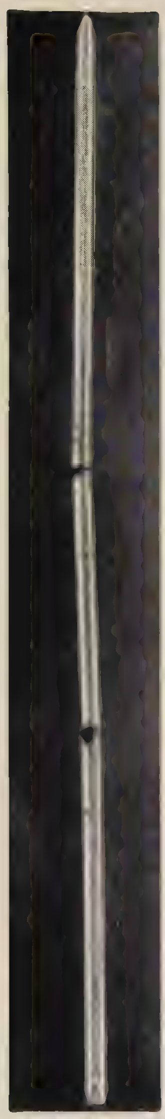
2



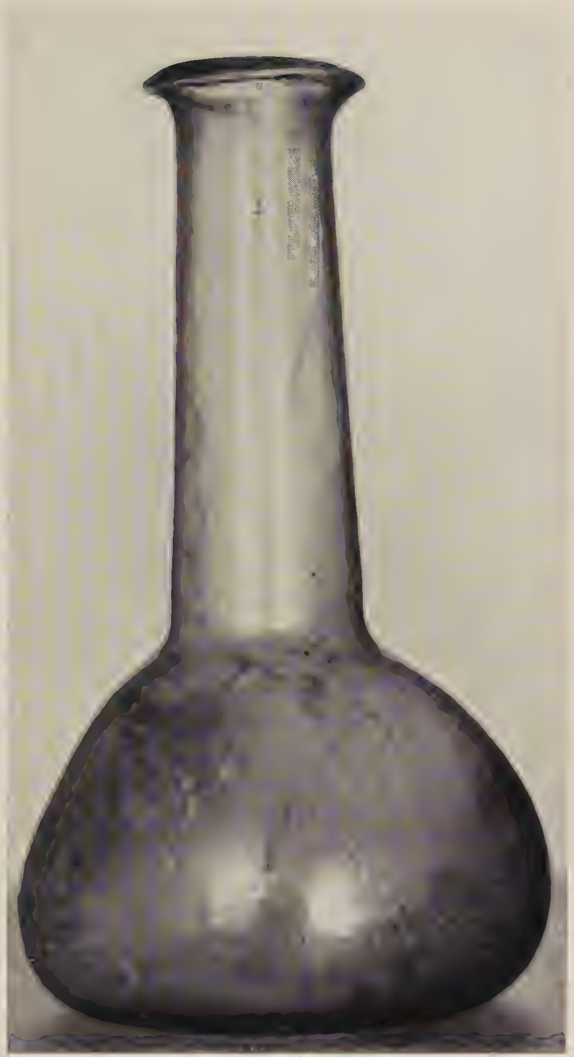
3

SIPHNOS: OBJECTS FROM ROMAN GRAVES.

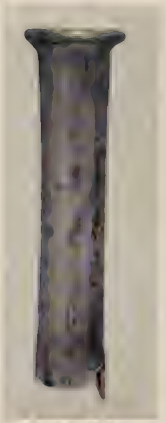
1. Glass buttons (under sides); 2, Glass buttons (profiles); 3, from No. 22.
Scale: 1, 9 : 10 (except as indicated); 2, 2 : 3; 3, 9 : 10.



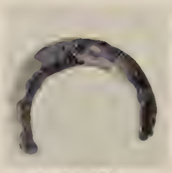
1. 26 (10)



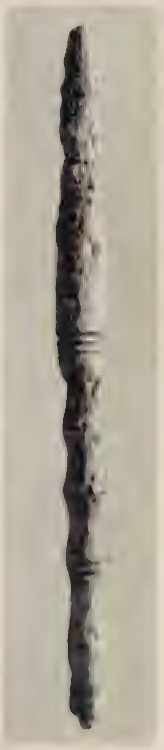
2. 26 (2)



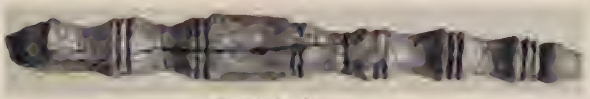
3. 26 (17)



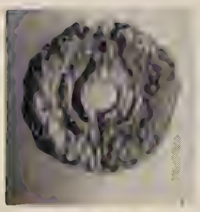
4. 26 (7)



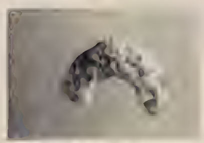
5. 26 (7)



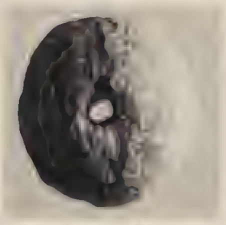
6. 22 (14)



7. 6 (12)

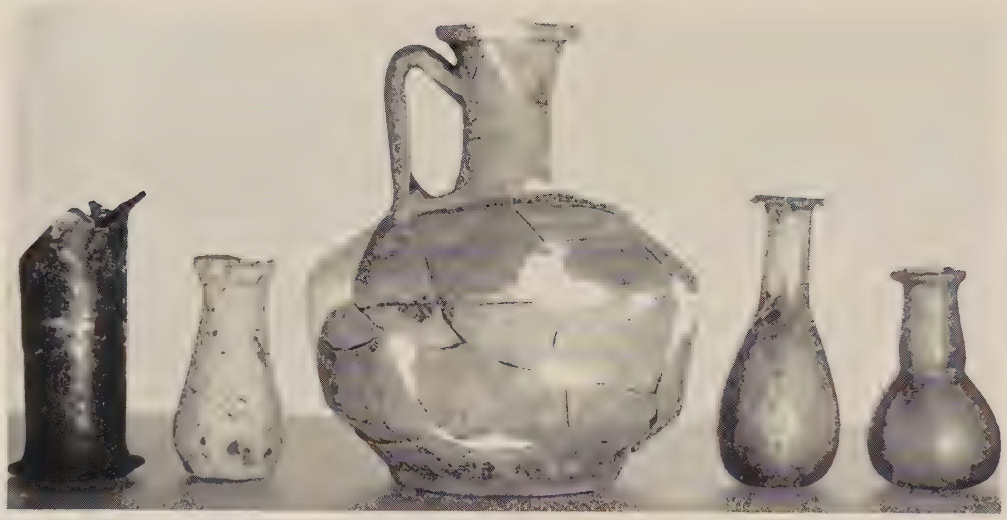


8. 6 (11)

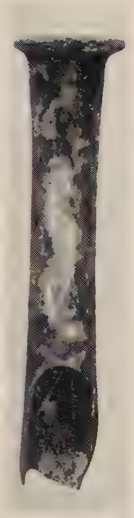


9. 26 (8)

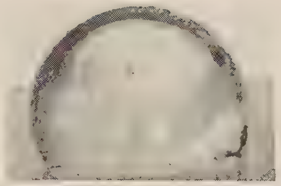
SIPHNOS OBJECTS FROM ROMAN GRAVES.
Scale 1 : 2.



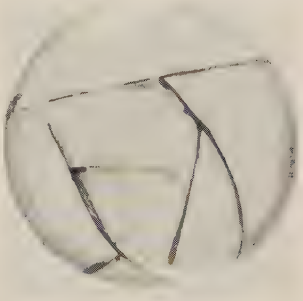
1. 22 (3) (4) (5) (1) (2)



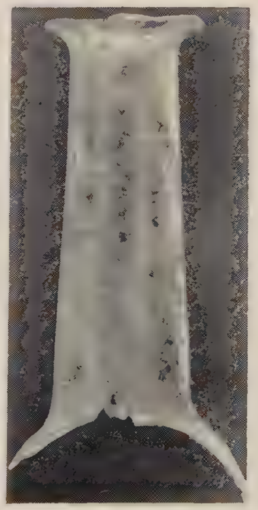
2. 22 (12, b)



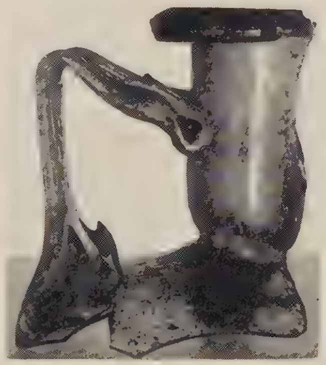
3. 22 (13)



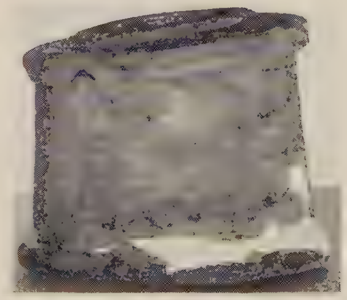
4. 24 (3)



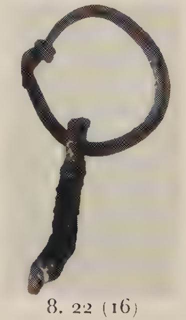
5. 22 (12, *a*)



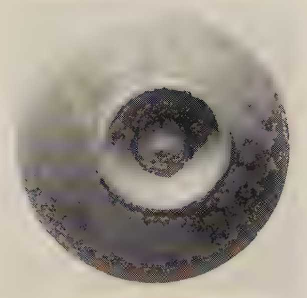
6. 22 (11)



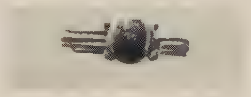
7. 22 (7)



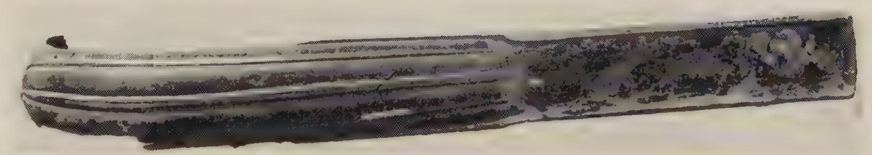
8. 22 (16)



9. 24 (4)

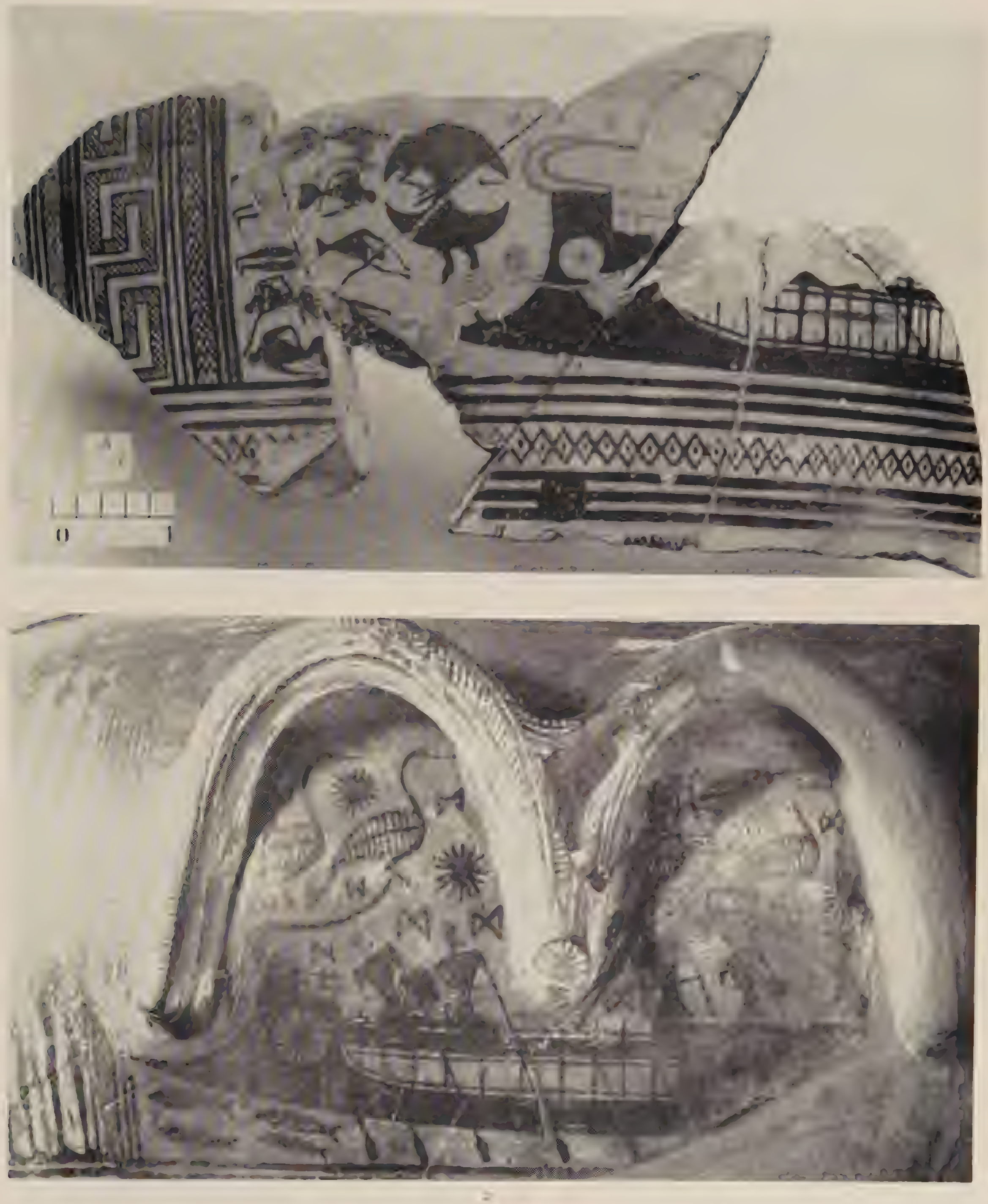


10. 20 (6)

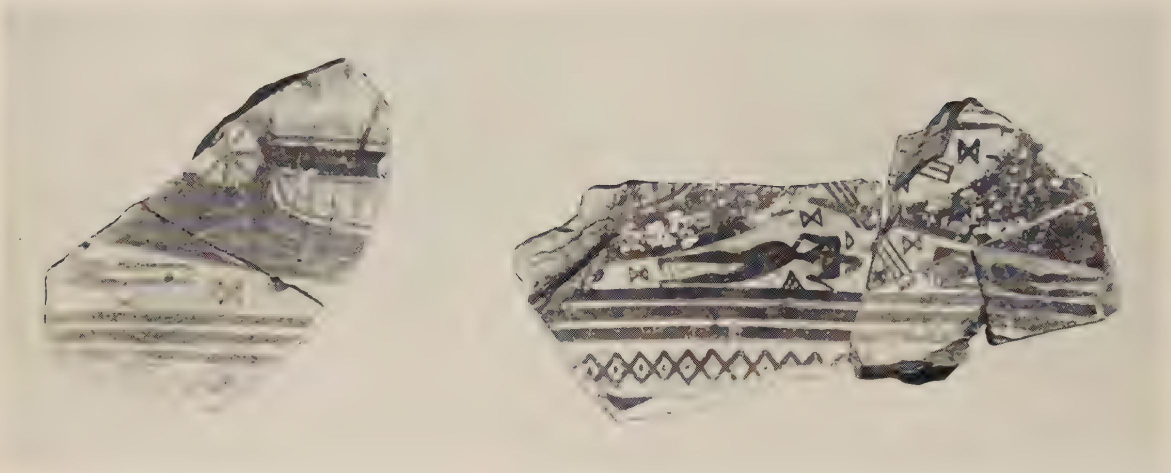


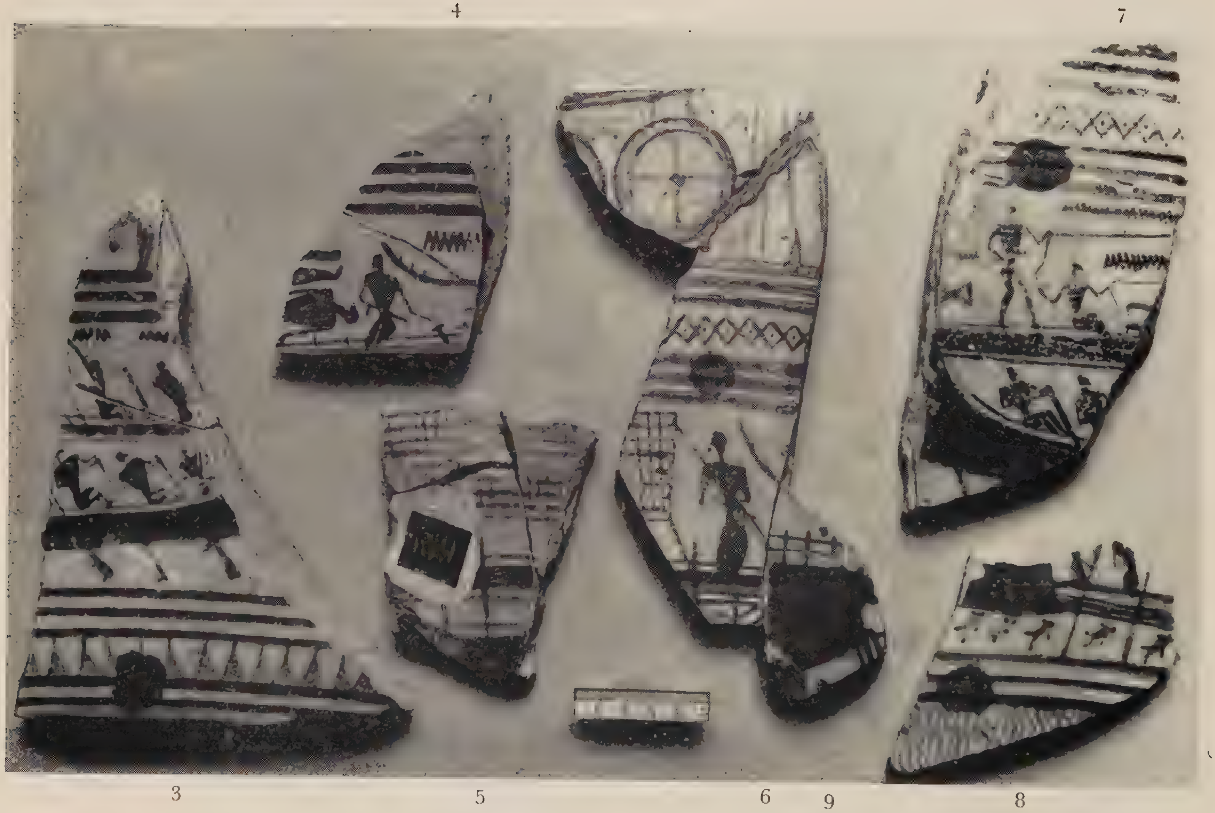
11. 24 (5)

SIPHNOS: OBJECTS FROM ROMAN GRAVES. Scale: 1, 5 : 11; 2, 5, 8, 4 : 5; 3, 6–7, 3 : 5; 4, 9, 11, 1 : 2; 10, 1 : 1.

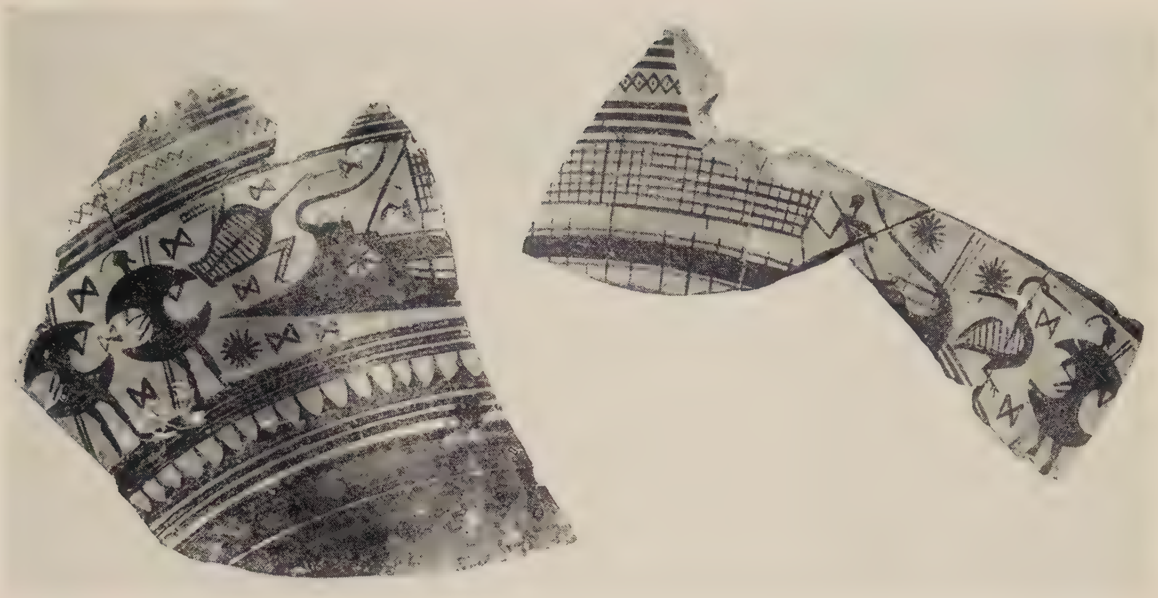


SHIPS ON GEOMETRIC VASES (Fig. 2, 18. Photo. Giraudon.



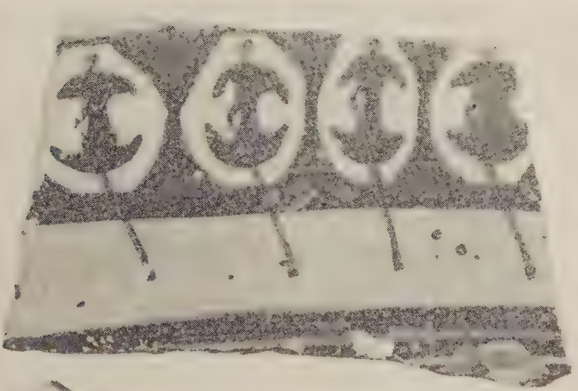


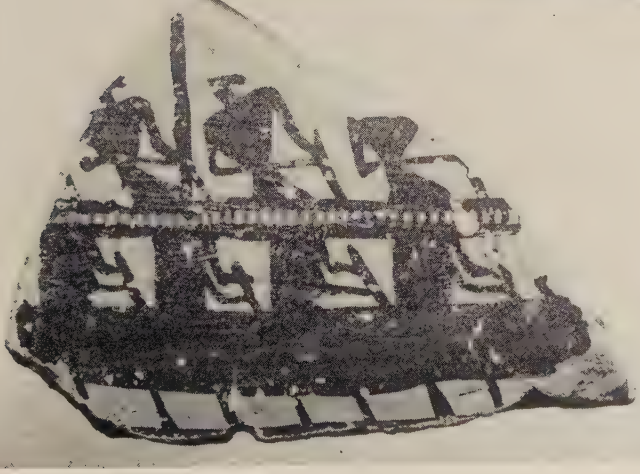
SHIPS ON GEOMETRIC VASES:
1, **13**; 2, **26**; 3, **29**; 4, **25**; 5, **17***c*; 6, **17***a*; 7, **22**; 8, **23**; 9, **17***b*. 3–9, Photo. Giraudon.



1

2





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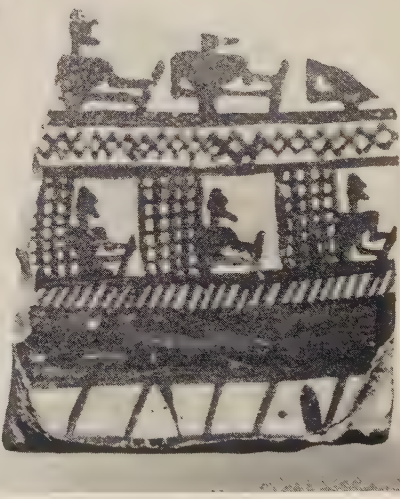
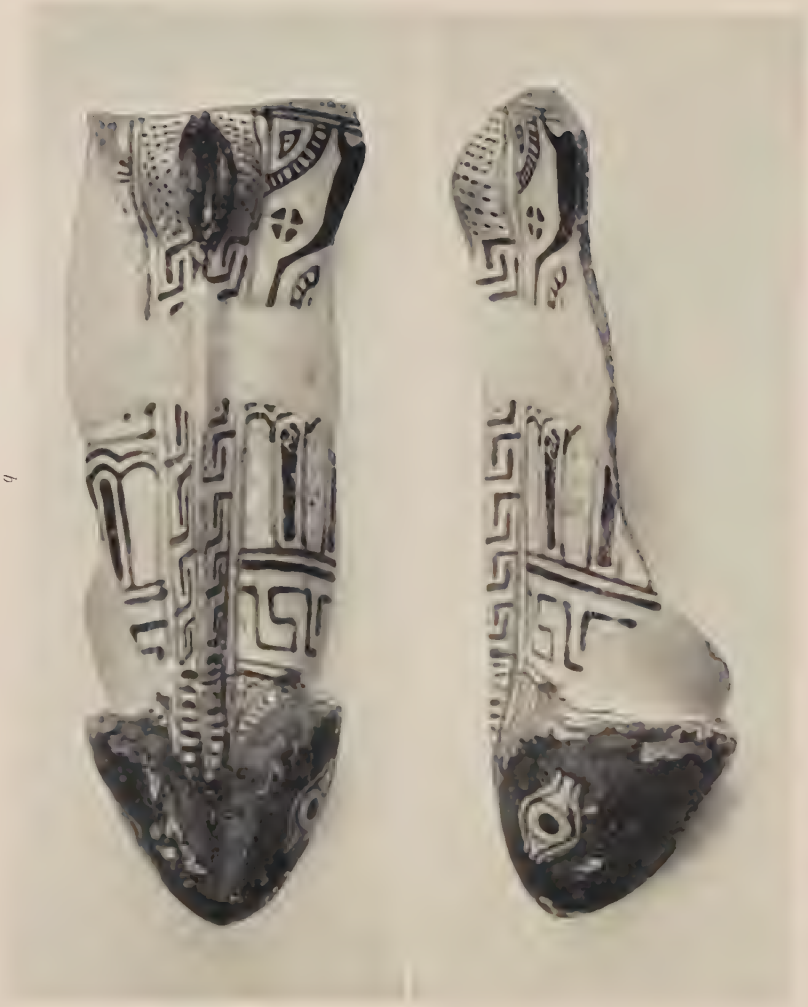
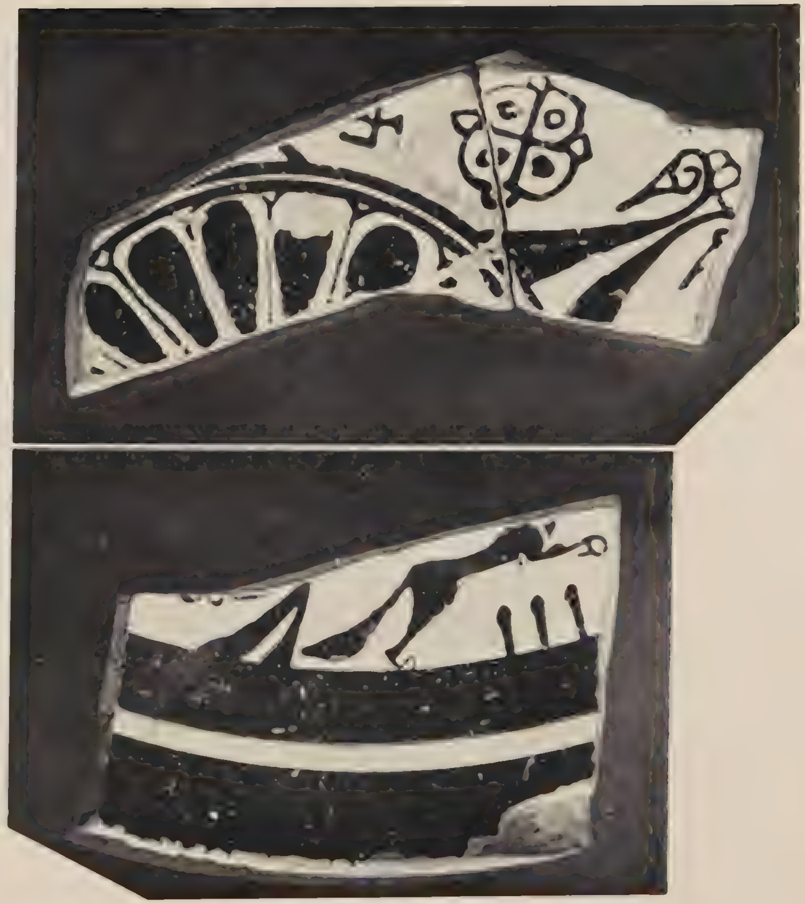


4

SHIPS ON GEOMETRIC VASES: 1, 14; 2, 33; 3, 31; 4, 32.

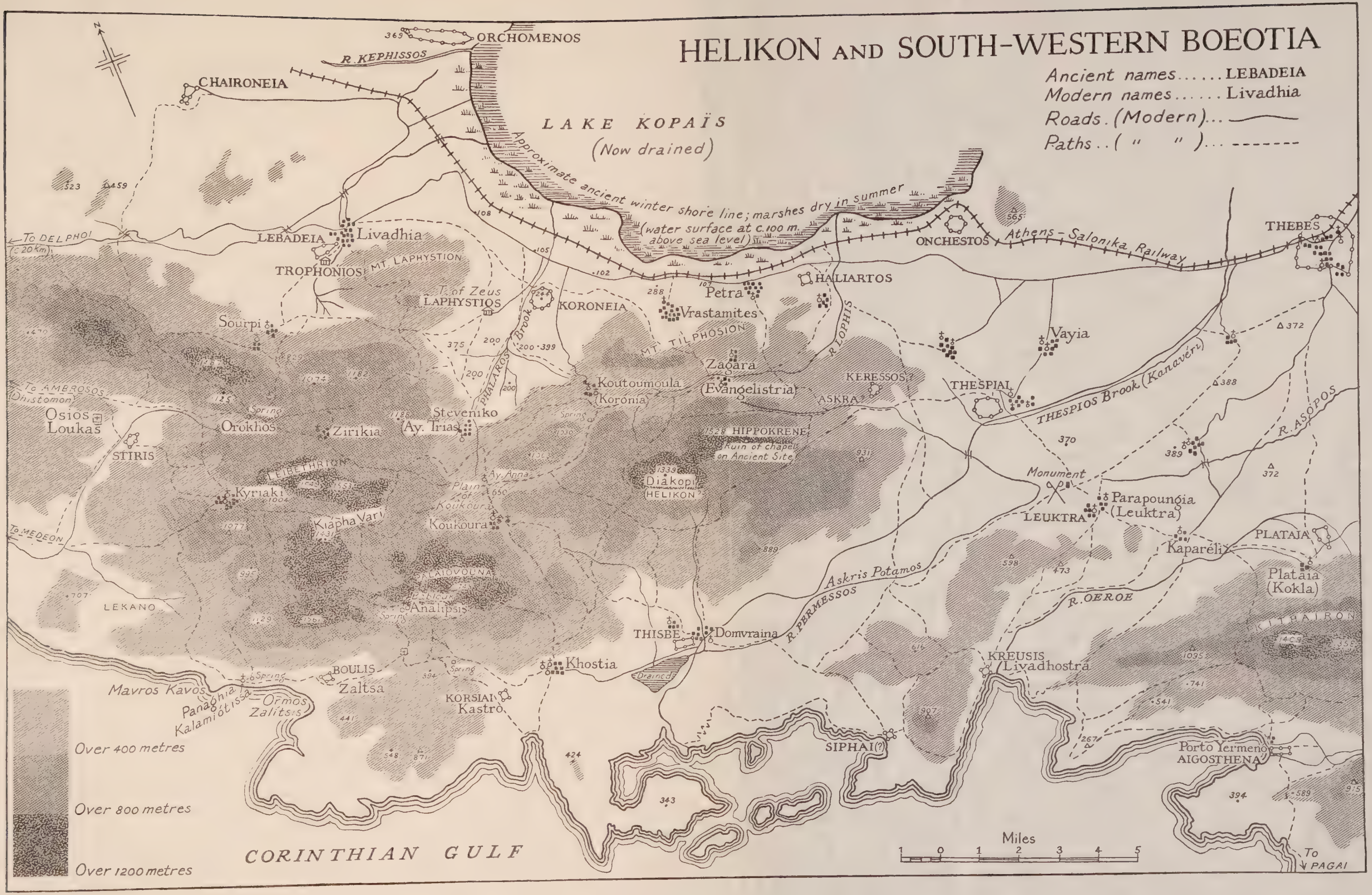


b



a

a, AEGINA. FRAGMENTS OF CHIOT DISH OF EARLY WILD GOAT STYLE. Scale 1 : 1.
b, BRITISH MUSEUM 88. 6–1. 496. CHIOT PHALLUS CUP OF MIDDLE WILD GOAT STYLE.
Scale *c.* 3 : 4.


HELIKON AND SOUTH-WESTERN BOEOTIA
Ancient names......LEBADEIA
Modern names......Livadhia
Roads.(Modern)...
Paths..(" ")...
ORCHOMENOS
R. KEPHISSOS
CHAIRONEIA
LAKE KOPAÏS
(Now drained)
Approximate ancient winter shore line; marshes dry in summer
(water surface at c.100 m. above sea level)
To DELPHOI (c. 20 km)
LEBADEIA
Livadhia
TROPHONIOS
MT. LAPHYSTION
T. of Zeus LAPHYSTIOS
KORONEIA
Petra
Vrastamites
HALIARTOS
ONCHESTOS
Athens - Salonika Railway
THEBES
Sourpi
MT. TILPHOSION
PHALAROS Brook
R. LOPHIS
Vayia
Zagara
(Evangelistria)
KERESSOS?
ASKRA
THESPIAI
THESPIOS Brook (Kanavéri)
To AMBROSOS (Dhistomon)
Osios Loukas
STIRIS
Orokhos
Zirikia
Steveniko
(Ay. Trias)
Koutoumoula
(Koronia)
Spring
HIPPOKRENE
Ruin of chapel on Ancient Site
Diakopi
HELIKON
LEIBETHRION
Kyriaki
Kiapha Vari
Ay. Anna
Plain of Koukoura
Koukoura
Monument
Parapoungia
(Leuktra)
LEUKTRA
R. ASOPOS
To MEDEON
PLATAIA
Plataia (Kokla)
Kaparéli
Askris Potamos
R. PERMESSOS
R. OEROE
PALAIOVOUNA
Analipsis
LEKANO
THISBE
Domvraina
Drained
Khostia
KREUSIS
Livadhostra
KITHAIRON
BOULIS
Zaltsa
KORSIAI
Kastro
Mavros Kavos
Panaghia Kalamiótissa
Ormos Zalitsis
SIPHAI(?)
Porto Yermeno
AIGOSTHENA
To PAGAI
Over 400 metres
Over 800 metres
Over 1200 metres
CORINTHIAN GULF
Miles
1 0 1 2 3 4 5